Creating opportunities for community self-organization: a task for integrated conservation and development initiatives

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Abstract
A key question for community-based conservation or integrated conservation and development projects (ICDP) is: What contributes to community self-organization? How does one get people and/or organizations involved in a project, willing to take responsibilities and to act? This paper explores key elements that contribute to community self-organization in the context of community-based conservation and ICDP initiatives. We examined some of the UNDP Equator Initiative cases, some of them finalists for the Equator Prize which recognize efforts in integrating biodiversity conservation and poverty reduction. Our data sources included case reports; semi-structured interviews with representatives of the 2004 Equator Prize finalists, and some additional ICDP cases. Our analysis shows that key elements contributing to community organization include: a shared vision of a social-environmental problem and motivation to tackle it; leadership (both local leaders and outside agents of change); capacity-building; use of local expertise; partnerships (both with government agencies and non-governmental organizations); and availability of funding and other resources. Many of these elements result from cross-scale interactions (both horizontal and vertical linkages). For instance, partnerships are often established between local communities and supportive organizations at regional, national or international levels. These supportive organizations may provide organizational expertise (e.g., regional development NGOs), training (e.g., regional conservation NGOs), legal support, and funding (e.g., international agencies). Our results indicate that policies aiming to create opportunity for community-based conservation and ICDP initiatives should *at first* promote and/or strengthen community organization. A possible way to approach such task is through valuing and empowering local institutions and encouraging and facilitating multi-level, cross-scale interactions.

Introduction

What makes a great cook ("chef"): one who follows all the recipes strictly or one who creates a delicious meal with the available ingredients? We stay with the second case. In this paper we use the cook metaphor to introduce the theme of how successful community-based conservation projects originates. We believe that more than the amount and variety of ingredients, what makes a delicious meal is the cook's ability to visualize beforehand the potential meal he can prepare with the available ingredients, and to choose and combine them appropriately (i.e., use them wisely). Of course, some basic ingredients are required in most, if not all, meals, such as salt, oil and sugar. The same may be said for community-based conservation (CBC) projects. Our study aims to show that there is no definite recipe for promoting successful community-based conservation, but a vision (a goal) and some basic ingredients is often necessary and the success of a project results from its ability use the available resources and skills (ingredients) wisely.

Community-based Conservation (CBC) initiatives and/or Integrated Conservation and Development Projects (ICDPs) aims to conserve biological diversity and natural systems while improving human welfare. We understand that CBC and ICDPs are integrated social-ecological systems (SES) (Berkes and Folke 1998), that is, ecological processes are influenced by human activities and, on the other hand, human institutions respond to environmental changes. According to Anderies et al (2004), "when social and ecological systems are so linked [as in the cases of CBC and ICDPs], the overall SES is a complex, adaptive system involving multiple subsystems, as well as being embedded in multiple larger systems".

Complex adaptive systems are "systems of people and nature in which complexity emerges from a small set of critical processes which create and maintain the self-organizing properties of the system" (Resilience Alliance 2006). Complex system has several attributes such as nonlinearity, emergence, uncertainty, scale, and self-organization (Levin 1998, Gunderson and Holling 2002). Most management systems, such as CBC and ICDPs, operates at multiple scales; that is, the governance structure encompass institutions at different political levels and the ecological processes affecting one ecosystem may run at multiple spatial and temporal scales. Ecosystem and social dynamics are often nonlinear and their outcomes uncertain. Self-organization is a characteristic of both human and natural systems. As Holling (2001 p. 403) puts it, "Self-organization of ecological systems establishes the arena for evolutionary change. Self-organization of human institutional patterns establishes the arena for future sustainable opportunities".

In this paper we focus our attention on aspects of self-organization in human system, in particular, we explore key elements (i.e., ingredients according to the cook metaphor) that contribute to community self-organization in the context of CBC and ICDP initiatives. We pose two major questions: (1) How does one get people and/or organizations involved in a project, willing to take responsibilities and to act? Or put it differently, what capacities and institutions turn it possible for people and organizations to work together? (2) What contributes to community self-organization? In other words, how conservation-

development projects originate, evolve, survive or disappear? In order to address these questions we examine several cases among the Equator Prize finalists and short-listed nominees, from both the 2002 and 2004 awards. The case-study research was carried out by several researchers and involved: in-depth field-research, desk-analysis, and interviews with EI representatives (Berkes and Seixas 2004, Fernandes 2004, Fernandes 2005, Herrera 2006, Jonas 2003, Maurice 2004, Medeiros 2004, Seixas et al submited, Senyk 2006, Shukla 2004, Timmer 2004a)

Before examining how communities self-organize throughout CBC and ICDP initiatives, it is important to define what we mean by "community". Agrawal and Gibson (2001, p.1) state that "communities are complex entities containing individuals differentiated by status, political and economic power, religion and social prestige, and intentions". Communities may or may not share the same space and may range from few individuals to hundreds or even thousands of people. In this paper, we take the above considerations and use the Singleton and Taylor (1992) concept of community as a set of people with some shared beliefs, who interact directly in frequent basis over multiple issues, and who expect to interact in the future. Hence, a community may be all the people living in a small fishing village, or a group of specialized people from one or more villages working together in a specific economic sector, such as honey producers. To give a better idea, the scope of the 2004 Equator Prize finalists varied greatly with regard to resources used, areas managed, and population involved: from ecotourism, to agro-business and to water management; from an area of 140 ha to an area of 3.4 million ha; and from one community of about 200 people to 22 villages totaling 30,000 people (Seixas et al., submitted).

The Equator Initiative has a Technical Advisory Committee who selects the successful cases among all the nominees. Hence, we assume that all the cases here investigated are successful initiatives contributing to both biodiversity conservation and poverty reduction. Despite of that, Seixas et al (Submitted) found that 33 percent of the 2004 Equator Prize finalists (N=26) focused first and foremost on poverty reduction, 8 percent focused primarily on biodiversity conservation and 58 percent focused both on poverty reduction and biodiversity conservation.

The paper presents five sections. Firstly, we investigate who are the major groups of stakeholders involved in the EI cases. Secondly, we discuss the trigger events and catalytic elements that spur each project. Thirdly, we look into funding and other resources used in these projects. Fourthly, the contribution of capacity building and knowledge systems in these EI case-studies are examined. Fifthly, we explore the role of leadership and key players. Finally, we present the role of partnerships established in different cases.

Major groups of people involved

Each CBC and ICDP initiative experiences different phases such as planning, implementing, monitoring, re-planning (i.e., adapting) and so for. Throughout these

phases, a diversity of people and organizations contribute with resources (funding or in-kind), expertise, labor, and/or facilitate decision-making and legal frameworks. Local communities and/or local-level organizations (either indigenous groups, local non-governmental organizations, or community-based organizations) are the major actors in these initiatives, despite the fact that some initiatives were initiated by outsiders.

Government agencies from different political-levels and economic sectors are often involved in such CBC and ICDPs initiatives, especially because these project does not take place in a political vacuum. They may be directly involved by providing technical and resource support or by approving policies and laws which facilitates CBC and ICDP development. There are cases though that the government are involved later in the process, due to political pressures such as the case of the community-based Ecotourism Lodge in Peru or to political reasons such as being linked to a successful project as in the case of Pred Nai forestry management in Thailand.

Most CBC and ICDP initiatives also benefit from the involvement of *supportive organizations* – organizations working closely with communities to improve conservation and/or development, but not considered government (e.g., research institutes, conservation NGOs or development agencies). Other actors involved in part of the CBC and ICDP initiatives are regional/national indigenous organizations and the private sector.

Trigger events and catalytic elements

Projects may originate from locals' demands or from outsiders' agendas, but often they evolve by partnership and feedback learning. Moreover, as Isely and Scherr (2003) point out, "even if the impetus for a project may not originate within the community, the project must be owned by the community via participation and implementation…. If a project is not community based to begin with, it should become so."

Seixas et al. (submitted) observed that 63 percent out of 24 finalists of the 2004 Equator Prize seemed to be initiated by community-based organization or local NGO while 21 percent were initiated (or largely influenced) by outside supportive organizations. Among the seven EI cases researched by the University of Manitoba team, four were initiated by community-based organization or local NGO (Belize, Guyana Peru, and Thailand), and three by outside supportive organizations (Brazil, India, and Kenya). The trigger events and catalytic elements in these seven cases are presented in **Table 1**. By *trigger events,* we understand the motives or events, which led people to get mobilized around an initiative. By *catalytic elements,* we understand the factors that contribute to speed the process of organizing an initiative (*initial catalytic elements*) and to maintain the initiative running (*continuing catalytic elements*). We observed that funding opportunity, strong leadership, capacity building, and supportive organizations are major catalytic elements in most of the cases. Each of these elements is discussed in more detail in following sections.

Table 1. Trigger events and catalytic elements leading to the organization of EI cases

EI case	Trigger events	Catalytic elements to start the project	Catalytic elements maintaining the project
Marine Reserve (TIDE) Belize	- increase slaughter of manatees - increase illegal fishing by foreigners	- strong local leadership - strong commitment of an int'l NGO - community support - involvement of key people, who had previous relation with the leader (i.e., use of existing network of friends)	- gov't approval of management plan - co-management arrangement - increased community awareness and ownership of the projects - capacity building: alternative and/or complementary livelihood options -successful fundraising
Oyster Producers Cooperative Brazil	- decreasing oyster yield due to over-harvest - gov't agency willing to create an extractive reserve	- involvement of research and government institutions to improve management and technologies - funding opportunities (call for project proposals)	- financial, technical and political support from a number of civil society organizations, gov't organizations and private sector - partnership between two gov't agencies providing capacity building and technical support
Arapaima Conservation Guyana	- Arapaima over-harvest - Iwokrama (Nat'l NGO) sponsored community workshops to identify priorities - workshop held in 2000 with Government officials, Brazilian and UK fish specialists, and Iwokrama scientists	- capacity building: knowledge transfer from a successful project elsewhere on fish monitoring - strong leadership - leader/organization acting as a funder/technical advisor/broker: able to make the rights connections to support the project	- creation of alternative sources of income - consistent funding, capacity building and organizational support by a nat'l NGO
Medicinal Plan Conservation India	- partnership between two NGOs (nat'l and reg'l) willing to promote community-based medicinal plant conservation - partnership among NGOs and State forest department encouraged through international funding in order to promote community-based medicinal plant conservation	- funding opportunity - replication of successful model - commitment of senior gov't staff - positive attitude and motivation of senior staff provoking enthusiasm among lower-level staff - series of state level project inception workshops for senior forest officials and project partners	- intensive capacity building provided by a diversity of NGOs strengthening community self-organization - alternative income source - reviving local knowledge - recognizing and networking among local healers

EI case	Trigger events	Catalytic elements to start the project	Catalytic elements maintaining the project
Honey Care Africa Kenya	- HCA saw an opportunity to develop a high-end honey supply to serve the domestic market in larger center which has been served by foreign honey producers	- secure market for all honey produced *Kakamega region* - strong leadership; - foreigners' support: skills and equipment - training and capacity building *Kwale region* - initial funding from NGO to buy beehives - training and capacity building	- fair price for honey - guaranteed market / alternative income source - debit from the purchase of beehives worked as an incentive to keep with beekeeping *Kakamega region* - NGO/leaders able to adapt *Kwale region* - individual nature of the project and profits worked as an incentive to continue the project
Community-based ecotourism Peru	- need to find economic alternatives for indigenous groups whose livelihood was restraint by the creation of a national park - outsider bringing the idea of ecotourism	- Pressure from indigenous org. and NGOs on gov't authorities to take action on improving the communities living conditions by giving them an economically sustainable alternative - int'l funding for lodge construction and capacity building - gov't agency logistic support	- community empowerment - community self-organization - the NGOs support in early years (1997-2003) - alliance with private business - increasing operation of the enterprise as tour agency.
Community Forestry Group Thailand	- large-scale destruction of local mangrove for intensive shrimp aquaculture: a direct threat on local livelihood	- creation of rules governing villagers harvest of local resources - creation of an informal patrol group to protect the mangroves and enforce local conservation rules - establishment of a village savings group (assisted by a monk) promoted organizational capacity, management skills, leadership, and united the community. The monk also promoted environmental awareness	- involvement of a NGO (capacity building and technical support) - involvement of Govt. Depts (technical support and resources) - networking with other community forestry groups

Source: Equator Initiative Technical Reports by D. Fernandes, J. Herrera, S. Maurice, D. Medeiros, J. Senyk, S. Shukla,

Jonas (2003) noticed that many of 27 finalists of the Equator Prize 2002 began due to a post-disaster situation. Those projects started due to unsustainable resource extraction (48%), political/legal conflicts (22%), environmental disasters (e.g., droughts, floods and hurricanes) (18,5%), low social welfare (18,5%); and construction projects (primarily dams and roads) (15%). Two or more factors may have triggered some of the projects.

Seixas et al. (submitted) compared the initial motives (trigger events or elements) to start each of the 2004 Equator Prize finalists with the lead organization in starting each initiative and observed the following pattern: local lead organizations often fight for rights and cultural revitalization, try to solve conflicts, and/or respond to environmental degradation, threats or disasters (50 percent of the cases). The motivation of outside supportive lead organizations is usually related to the integrated conservation and development agenda (21 percent of the cases). For example, to promote conservation of protected areas and/or manage their buffer zones sustainably while providing livelihood alternatives for communities living in or around the protected areas; and to develop entrepreneurial activities to improve community livelihoods while promoting environmental awareness.

Even when a project is community initiated, it often requires support from outside organizations. In these cases, a diverse group of ordinary people (e.g., school teachers, farmers, religious leaders, youth groups or community leaders) came together to search for solutions for social or environmental problems or threats to their livelihoods. In many cases, however, they lacked sufficient skills or negotiating power to carry out their ideas (e.g., they lacked power to overcome institutional barriers and to penetrate into market or policy-making processes) and asked some NGOs or government agencies already working in the area to help them throughout the process. Isely and Scherr (2003) observed a similar pattern among cases of Ecoagriculture initiatives extracted from the 2002 Equator Prize nominations.

In some cases there are trigger events leading to the establishment of an initiative, such as the large-scale destruction of local mangrove for intensive shrimp aquaculture in the Pred Nai community of Thailand – a direct threat on local livelihood. In other cases though, there are a series of events (related or unrelated ones) that takes place throughout the years preceding the initiative establishment. In the latter case, some key people or organizations see an opportunity to build upon existing knowledge and institutions to solve current problems. Olsson et al. (2004) presents a good example of how a key leader built upon opportunities and existing knowledge and institutions (produced from unrelated on going activities and events) to develop wetland landscape governance in southern Sweden. The EI Oyster Cooperative case in Brazil built on a cumulative body of knowledge on oyster aquaculture produced by different projects over a three-decade period. The EI community-based Ecotourism Lodge in Peru shows a sequence of events, instead of *one* trigger event, leading to its implementation (Box I). In all cases, a sequence of workshops/meetings involving locals and outside players was critical to organize the community, to plan and implement the projects.

In addition to the aforementioned catalytic elements, another one that appears in most of the seven EI cases studied in detail is clear pre-existing relationships among some of the key groups or key people involved in the initiative before the project started (Berkes and Seixas 2004). For instance, in the Oyster Producers Cooperative in Brazil previous relations were built among the local community, an University research group and an government agency (the Forest Foundation) during the prior implementation of a protected area (Extractive Reserve) encompassing the community. Another instance, in both Kenyan beekeeping cases, the Honey-Care partnering organizations (a community-based organization in Kakamega and a NGO in Kwale) were already carrying out development work with local farmers before the Honey Care project started.

Funding and other resources

Most projects need initial investment resources either funding or in-kind contributions. Funding is often needed to start a project (start-up funding) and sometimes to conduct the project (operational funding). Very few initiatives start with no funding; this was the case of only 12% of the 2004 Equator Prize finalists (Seixas et al. submitted). Funding seems a less important element to start an initiative when environmental awareness and livelihood treats trigger immediate community action. In fact, all the three Equator Prize finalists in 2004 initiated with no funding were community-based initiatives promoting resource management to ensure local livelihoods. One of them, the Thailand case studied in detail by the University of Manitoba team, emerged as a response to large-scale destruction of local mangrove for intensive shrimp aquaculture – a direct threat on local livelihood (**Table 1**). An informal grassroots initiative created local rules for governing villagers' harvest of local resources and created an informal patrol group to protect the mangroves and enforce local conservation rules using only people's work, resources and willingness to collaborate; i.e., no funding was initially used.

Even in cases where no start-up funding is used, operation funding may be used improve the initiative. In the Thailand case, after the a formal Conservation Group was formed (about 10 years after patrolling had began), it received funding from the World Bank through a government program to buy equipments and build infrastructure to improve patrolling activities. This case brings to light the importance of formalizing/ legalizing community organizations in order to access funding.

Funding may come from multiple sources and fundraising skill is often critical to the project's success. **Figure 1** shows how outside funding may be a major enabling factor and how a diversity of sources are often needed. There are cases where funding comes from one major source, such as the Ecotourism Lodge in Peru, funded by an international development agency (GTZ); however, in most cases it comes from five or more sources, mainly international ones, and are used for different tasks within an initiative. Hence, as expected, in all the seven EI cases studied in detail, one of the key organizations involved in the project had previous experience in applying for funding. This knowledge was used to access funds from different sources.

Seixas et al. (submitted) investigated possible ways of getting money for an initiative, based on interviews with the 2004 Equator Prize finalists. They identified at least nine channels of money flow in those cases (**Table 2**). Starting from the initiative side, initiatives may contact donors, on their own or with outside help, and apply for funding. Key, knowledgeable people seem to play a major role in securing funds – they either know about a funding opportunity and/or help locals to write funding proposals. Starting from the donor side, donors may have a fund to be used in a pre-established program and they use larger NGOs or government to redistribute the fund to small initiatives. In some cases donors may give money to a large NGO, research institute or government to be employed in building capacity at the local-level, but no direct money is passed on to local-level organizations. The extent to which different channels of funding impact each initiative's outcomes concerning biodiversity conservation and poverty reduction deserves investigation – in particular considering that many countries around the Equator Belt have weak institutions and corruption is more the norm. Another point that is worth investigating is whether small grants (such as GEF-UNDP SGP grants) are better managed and more effective in achieving their goals than large grants. Some interviewees have pointed out, for instance, that small grants seem more appropriate to begin small initiatives.

Table 2: Ways of getting money to develop an initiative

FUNDING CONTACTS
Local level organization →[1] Donors [2]
Local level organization → Supportive organization[3] → Donors
Local level organization → Key person → Donors
Large NGO → Donors
Donors → Large NGO → Local level organization
Donors → Government → Local level organization
Donors →[4] Local level organization
Donors → Large NGO
Donors → National gov't → large NGO

[1] Information source: news, agencies working in the area
[3] Donors may be government, NGOs, or funding agencies

In the large majority of cases (if not all), funding is used to cover capacity-building costs, including technical training by experts. Funding may be also used to cover costs of equipment, constructions, expansion, and operational costs as in the Oyster Producers' Cooperative in Brazil; and to carry out surveys and promote an alternative livelihood option as in the Arapaima Conservation initiative in Guyana. Funding may be used yet for innumerous other purposes in different projects.

It is important to note that in some cases, funding or in-kind donations may be raised primarily inside the community; that is, community members contribute money to a community fund or donate goods to be used for different purposes. For instance, an innovative financing scheme was developed by the Pred Nai Village Savings Group in the Thailand case (Box II).

> **Box II: The Village Savings Group in Pred Nai, Thailand**. "Established with the help of a local Buddhist monk in 1993, the Village Savings Group was set up to allow villagers to purchase a pre-arranged number of "stocks" each month at a set price. Villagers are limited to purchasing a maximum of 50 stocks/ month/member of the household and must purchase the same amount each month over a year. Thus the savings group acts as a forced-savings mechanism encouraging villagers to save money. Interest payments are paid out to the stockowners every 6 months, allowing them to make a small but secure amount of money from their savings. Once villagers reach 40,000 baht in stocks (approximately $1,000 USD) they are then permitted to begin withdrawing money from their savings. The Village Savings Group also functions to provide low-interest (currently set at 1%) loans to community members for social or economic development projects. A committee of 14 villagers operates the savings group and makes decisions approving or denying loan applications received from villagers. The priorities for approving loans are education and healthcare, with an emphasis on treatment of illness; but loans may also be provided for agricultural improvement projects or other projects deemed to be valuable to the village. Thus, while not directly improving incomes in the community, the Village Savings Group has functioned to improve social welfare and economic development, subtly assisting with income redistribution in the village (the wealthy tend to buy more stocks/month and the poorest villagers can receive low interest loans for development) and to encourage savings within the village. Participation in the savings group has also helped villagers to improve their money management skills within their households" (Senyk 2005).

In order to design and implement their projects, most initiatives use some voluntary help and/or free facilities and lent equipments provided by supportive organizations and NGOs, government, and university personnel. This included voluntary help from people paid from other sources but allowed to work in these projects during their free time. Such help included writing proposals, establishing contacts with outside organizations, helping to register community groups and/or cooperatives within the legal system, providing transportation for people to attend meetings, helping organize training, and promoting the project (Berkes and Seixas 2004).

Capacity building and knowledge systems

Key elements to start any initiative are knowledge and information about the social-ecological system and about possible ways to change it towards the initiative goals. Knowledge may be generated locally (*Local Knowledge*) or elsewhere. *Outside knowledge* may be either scientific knowledge or practical knowledge. Here, we wish to explore how knowledge and information are shared and transmitted among different actors (key players) in CBC and ICDP initiatives. In other words, how new capacities are built to develop, implement and improve CBC and ICDP initiatives? We understand that *capacity building* is a major factor in community self-organization.

From 24 finalists of the 2004 Equator Prize, at least 50 percent of them built capacity in community organization, 42 percent in small-business development (including ecotourism), and 29 percent in environmental and resource management (Seixas et al. submitted). Concerning community organization, training was provided for institutional capacity building, financial management, organizational management techniques, board development, team building and community work, leadership skill, youth development and communication skills. Concerning techniques/methods for resource management and enterprise development, training was provided for: conservation planning, ecosystem management, sustainable agriculture, farming and agro-forestry, techniques for small enterprises (including agro-business and ecotourism) among others.

The term, capacity building, is usually used to mean government, NGO or other technical people "educating" the local people. However, in the cases studied in detail, it is clear that such education is a two way process: (1) government, NGO, and private sector personnel sharing technical information with community members, and (2) the latter sharing local knowledge with the former. Formal capacity building has been provided by both the major organization(s) involved in the project and many other organizations holding particular knowledge, which have been contracted by the project to carry out specific tasks (Berkes and Seixas, 2004).

Formal training programs in community organization and technical issues, meetings, workshops and guided visits are a few examples of how capacity may be built at community level. Formal training programs are the most common way of bringing outside scientific and practical knowledge to the community. In most, if not all, of the projects, the training that local people received has empowered them in economic terms as well as in social aspects, as in the case of women's groups in India (Berkes and Seixas, 2004).

Meetings, workshops and guided visits are good arenas of sharing both outside and local practical knowledge. Learning from successful example or from previous mistakes is a powerful way of building capacities. In some of these arenas, there is transfer of know-how and knowledge from previous positive/negative experiences at the same community or from experiences at other communities. Another way to build capacity among community members is to invest in youth leaders through higher education programs related to conservation and development in recognized universities.

One interesting aspect of capacity building as a two-way process was the establishment of informal 'learning networks' in some of the cases (Berkes and Seixas 2004). In the Brazilian case, a multi-level network of people from a diverse set of organizations worked together to tackle new problems during periodic meetings. In Guyana, several meeting involving the major organizations and scientists were designed to bring together local and scientific knowledge and experiences in a collaborative, problem-solving environment, as seem to be the case in adaptive co-management elsewhere (Olsson et al. 2004). Indeed, one characteristic of all these projects is that they provided space to combine local and scientific knowledge to either improve resource management or human well-being (Berkes and Seixas, 2004).

In addition to building capacity at local level, in some instances, capacity needs also to be built among government agents, NGO staff, and researchers involved in community work. One way towards this end is providing training in participatory methodologies and research for community-based conservation and development. Capacity building should be viewed not simply as the training activity but also the implementation of what was learned during this activity (Hari Kushardanto, pers. comm.).

Leadership and key players

Leadership is fundamental to drive CBC and ICDP initiatives. Leadership may be provided by individuals or organizations (NGOs, government agencies, private sector enterprises, research institutions), and be from within the community or from outside. A literature review on leadership indicates that successful leaders are likely to have characteristics of one or more of the following: innovators, communicators, learners, bridge-builders, and systems thinker (Timmer 2004b, **Table 3**). Timmer (2004a) analyzed five Equator Prize 2002 finalists on the lights of these characteristics.

Table 3. Leadership characteristics (Timmer 2004a)

Leadership	Characteristics
Leader as Innovator	• Embraces uncertainty and takes risks • Creates value through gap-filling, pulling elements and people together in a new way
Leader as Communicator	• Expresses a clear and compelling vision centred around common values • Facilitates an open and interactive dialogue amongst stakeholders and harnesses the leadership capacity of stakeholders
Leader as Learner	• Adapts to shifting relationships and circumstances • Actively promotes learning as a core value • Establishes mechanisms for monitoring progress and learning structures
Leader as Bridge-Builder	• Understands and works with diverse stakeholders • Creates networks of stakeholders to together address a

	challenge across boundaries and scales
	• Has the ability to manage conflict in a constructive way
Leader as Systems Thinker	• Sees interrelationships and processes and focuses on areas of high leverage
	• Distinguishes amongst different kinds of complexity
	• Moves away from blame and avoids symptomatic solutions
	• Surfaces underlying assumptions and mental models

Many initiatives during its beginning had a key leader or organization acting as a *broker*, that is, able to make the right connections to promote capacity building, and achieve technical support, funding support and/or political support, as in the case of Leader I in the Brazilian case (**Table 4**). The broker may also provide a vision for or reinforced the motivation behind the initiative, and promote players' trust in the initiative as in the case the case of Pred Nai Community Forest Group in Thailand. In many instances, a broker as a key player in starting an initiative is likely to have characteristics of innovator, communicator and bridge-builder. In other instance, the broker may also have characteristics of systems thinker and learner, as in the case of the head of the NGO TIDE in Belize; he acted as learner, bridge-builder, and system thinker. It is also important to note that in some cases the leadership role seems diffuse among several players, as in the Indian and Peruvian cases.

Leaders are often viewed as 'agents of change'. These key players (people and/or organizations) lead in many instances the process of transformation of the social-ecological system. There seems to have a strong correlation between 'agents of change' and level of education. We identified agents of change in at least seven out of 24 finalists of the Equator Prize 2004 (Seixas et al. submitted). All of them were well-educated people, some holding Masters or PhD degrees and some being religious leaders. There are cases, though, in which leaders have no higher education, but often they are better educated (i.e., have more school years or are able to speak a second language) than the average people in the community.

An initiative may have different key players leading different tasks concomitantly or in sequence. As well, in the same initiative, the role of one key player may change over time. Our analysis for the seven EI cases shows that key players and their roles have changed over time in all of the projects (Berkes and Seixas 2004). In Brazil, a sequence of government agents/researchers played a leadership role throughout project design and implementation (**Table 4**).

Table 4: External leaders and their roles, affiliation and connections in the Brazilian case. Source: D. Medeiros, 2004.

	PHASE				
Phase	I	II	III	IV	V
External Leader	Leader I (1990-1996)		Leader II (1995-1999)	Leader IV (2000-mid2004)	Leader V (mid2004 – present)
			Leader III (1995 - present)		
Org. Affiliation	State University Research Institute	State Forest Foundation	State Forest Foundation	State Forest Foundation	State Forest Foundation
			State Fisheries Institute		
Role	grad student: research socio-ecological viability of extractive reserve	government researcher: start attempt to implement the extractive reserve	government researchers: contact all oyster harvesters, initiate cooperative	government researchers: capacity development of oyster harvesters, establish extractive reserve	government researchers: assist Cooperative secure a market
Connections	Environmental Ministry, State Secretariat of the Environment [which encompasses State Forest Foundation]	State University Research Institute, State Fisheries Institute, Community-Based Organization, Leader II and III,	State University Research Institute, State Health Organization, Municipal Government, Local NGO, Local Religious Organization, Leader IV	National and International Funding, State University Research Institute, State Health Organization, Local NGO, Education Agent, Economic Planning Agent, Market Development Agent, Leader V	National Funding, State Health Organization, Market Development Agent

The role of agents of change, bringing new knowledge, ideas and/or technology to local people was crucial for the project development in all the seven EI cases. In general, women play a minor role as agents of change and local leaders in formal organizations, government departments and NGOs. Exceptions included the female head of the Pred Nai community in the Thailand case and the outside female government agents/researchers leading the Brazilian case in equal proportion with outside men. In all the other cases, leaders are male. At the community level in three of the cases (from India, Kenya, and Peru), increasingly more women became involved in livelihood opportunities promoted by the project. Some of these women became local leaders within their own groups (Berkes and Seixas 2004).

Partnerships

We have pointed above that CBC and ICDP initiatives often establish partnership with supportive organizations (e.g., conservation or development NGOs), government agencies, and/or private sector at local, municipal/district, regional, national or international levels. In essence, community self-organization evolves in a multi-level governance system. In this section, we aim to introduce the nature of partnership and how it contributes to community self-organization.

We observed that there are both formal and informal partnerships. Formal partnership takes place when government and other supportive organizations provide organizational expertise, legal support, training, and/or funding. Informal partnership may evolve by informal learning processes; that is, when certain arenas (e.g., workshops, meetings, visits, bar talks, one-on-one talk) promote knowledge and information exchange among people, including sharing of lessons learning from success and mistakes. This people may be community members, supportive organization staff, government agents, members of other communities doing related work, etc.

The number of formal partnership established in each initiative changes over time and is likely to reflect a balance among available resources within the community, new needs created by the initiative, and leadership ability to maintain or establish new partnership. Among 21 finalists of the Equator Prize 2004, the number of partnership per initiative varied from two to 16 (Median 5, Mode 4) (Seixas et al. submitted). From these 21 finalists, 71 percent (15) of the initiatives had some kind of support from at least one international-level organization (development and environmental NGOs, development agencies, funding agencies and embassies); 48 percent (10) of the initiatives had the municipal or district-level government as a key partner; the same amount (10) had at least one national-level environmental and/or development agency/ministry as a partner; and, 43 percent (9) of the initiatives had at least one academic or research organization working in collaboration with them.

Fritjof Capra (no date) says that, "Partnership is a key characteristic of life. Self-organization is a collective enterprise". These words explain much of what this paper is about. Partnership is crucial for community-based conservation and ICDP initiatives. It is one of central pillars of community self-organization.

Conclusion

This paper aimed to answer two questions. (1) How does one get people and/or organizations involved in a project, willing to take responsibilities and to act? Or put it differently, what capacities and institutions turn it possible for people and organizations to work together? (2) What contributes to community self-organization? In other words, how conservation-development projects originate, evolve, survive or disappear? In the following paragraphs we hope to answer these questions, at least partially.

How does one get people and/or organizations involved in a project, willing to take responsibilities and to act? We observed that in some initiatives, people had previous experiences working with community mobilization (e.g., through religious groups) and awareness development. In others, capacities regarding social mobilization and social-environmental awareness had to be built throughout the process. Key leaders providing a vision of the potential outcomes and working as facilitators and internal conflict managers had played a major role in guiding the process. Incentives, particularly economic ones, increase peoples' commitment to the initiative. In many cases yet, the initiative worked with existing institutions and social networks. Building on existing institutions and capabilities has served as a catalyst to some initiatives. Sick (2002, p.19) calls attention, however, to the fact that "while existing institutions are likely to be more enduring than those created artificially by outside organizations… [they] may be prone to co-optation by local elites". Involving local people in a project is not an easy task. Some initiatives may face barriers that are external to the local group (e.g., dealing with guerillas, dictatorial governments) as well as those that are internal (e.g., internal group conflicts, and lack of trust of outsiders' ideas) (Seixas et al., submitted).
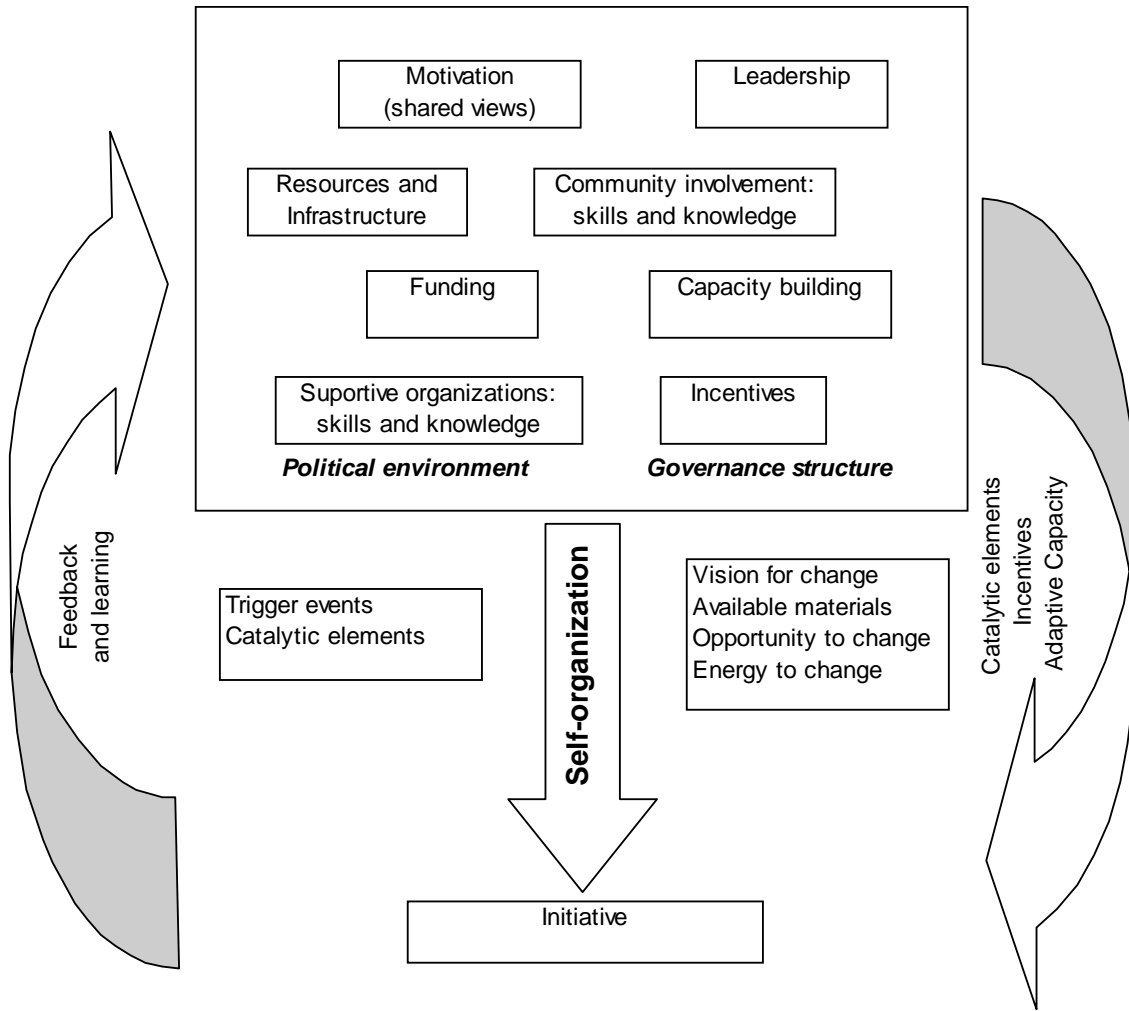
How conservation-development projects originate, evolve, survive or disappear? Going back to our cook metaphor, we observed throughout this paper that there is no perfect recipe for conservation-development projects. Some ingredients though are often necessary (e.g., vision of possible change and motivation to promote change, leadership, and community involvement) and others may serve as catalytic in the self-organization process (e.g., knowledge and skills of supportive organization, funding and other resources, capacity building, social-economic incentives). **Figure 1** attempts to provide a model of the dynamics of the self-organization process in CBC and ICDP initiatives. It provides the key elements that have contributed to the origin and development of most the projects analyzed by our research team. Each project used different 'amount' of these elements and not all projects used all the elements. Basically, a self-organization process start when someone or a group of people *envisions a transformation* to improve a social-ecological system. The envisioning process may be a response to a post-disaster situation, a conflict situation or some other trigger event. This vision is often shared with community members and potential partners. A shared vision of a social-environmental problem and motivation to tackle it is essential to the success of the project. When a *window of opportunity* (Olsson et al. 2004) appears (such as favorable institutional environment, potential partnership with government and supportive organizations, and/or capacity building opportunities) one or more key people (leaders) start to mobilize the

available materials and energy for the project. Materials may be in-kind resources, infrastructure, funding, information and knowledge. Energy refers to the actual involvement of different actors into the process.

After the initial self-organization process, the project is often reconfigured through feedback and learning; that is, although not all projects have a monitoring systems, lessons of what works and what does not works is often incorporated (though it my take a long time) into new arrangements (configurations) of the project. Catalytic elements and social, economic and/or ecological incentives often moves the project forward. However, it is the capacity to adapt to internal forces (e.g., new demands, internal conflicts, etc) and external forces (e.g., markets, central government policies, international economic policies ("globalization") and donor policies) that dictates the ability of a project to survive or disappear.

One hypothesis that emerges from our research is that complexity of an initiative structures and functions (e.g., partnerships, resource and knowledge mobilization) increases as the initiative broadens its initial goals and needs; and the complexity decreases after capacity is built and/or the initiative tends to become self-sustained while maintaining focus on its initial goals/needs.

In sum, our analyses indicate that policies aiming to create opportunity for CBC and ICDP initiatives should *at first* promote and/or strengthen community self-organization. A possible way to approach such task is through valuing and empowering local institutions and encouraging and facilitating multi-level, cross-scale partnerships.

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Motivation
(shared views)

Leadership

Resources and
Infrastructure

Community involvement:
skills and knowledge

Funding

Capacity building

Suportive organizations:
skills and knowledge

Incentives

Political environment

Governance structure

Feedback
and learning

Trigger events
Catalytic elements

Self-organization

Vision for change
Available materials
Opportunity to change
Energy to change

Catalytic elements
Incentives
Adaptive Capacity

Initiative

Vision: leadership, community motivation, incentives
Materials: in-kind resources, infrastructure, funding, informantion/knowledge
Opportunity: institutional enviroment, partnerships, capacity building
Energy: leadership, community involvement, supportive organization involvement

Figure 1. Self-organization of conservation-development projects: origins and evolutions

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