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Rare's Implementation Strategies of Environmental Conservation in Indonesia

Alvaro Arvizo

University of Texas at El Paso, aaa_arvizo@yahoo.com

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RARE'S IMPLEMENTATION STRATEGIES OF ENVIRONMENTAL CONSERVATION IN
INDONESIA

ALVARO ARVIZO

Department of Communication

APPROVED:

Stacey K. Sowards, Ph.D., Chair

Frank G. Pérez, Ph.D.

William Hargrove, Ph.D.

Patricia D. Witherspoon, Ph.D.
Dean of the Graduate School

DEDICATION

This thesis is dedicated to the four people in my life closest to my heart. They have bestowed kindness, patience, unrelenting support, and above all love, and have helped me become the person I am today. I dedicate it to the beloved memory of my mother Victoria Quiñonez Arvizo, who sacrificed her life for the well-being of mine, to my wife Diana, the strong pillar standing by my side, lifting me high with her benevolent and unselfish spirit, and to my two rays of sunshine, Andres and Adrian, who positively changed my life forever. I love you all and may GOD bless you always.

RARE'S IMPLEMENTATION STRATEGIES OF ENVIRONMENTAL CONSERVATION IN
INDONESIA

By

ALVARO ARVIZO, B.B.A.

THESIS

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ABSTRACT

Like most developing nations, Indonesia is at a crucial stage in its modern political and economic history. Opposing forces are constantly at work, a government struggling to make Indonesia a modern nation and the economic demands of a growing population. This presents the country with a multitude of problems. Nature's resources are exploited for personal economic gain with no regard for the long-term effects. This dilemma reveals a dire and even tragic outcome: deforestation at an alarming rate, habitat destruction, pollution, etc. This is a major concern for environmental conservation and non-profit government organizations (NGOs) worldwide. The American NGO Rare is at the forefront of this issue. Its aim is to meet community and environmental needs at the local level. Research was conducted to study Rare, its collaboration with its partners in Indonesia and its implementation strategies of environmental conservation. A crucial and key factor used by Rare in its campaigns is known as the "barrier removal operation plan" – BROP. This paper analyzes the implementation of environmental advocacy campaigns in Indonesia with a focus on how Rare uses BROP as the "behavioral change" strategy needed to ensure environmental campaign success. This approach proved to be effective in creating and changing awareness, attitudes, and behaviors toward conservation at the local level, which is paramount in changing the way people relate to nature. Local adaptation, by integrating the economic and livelihood needs of local communities while striving to achieve the goals of biodiversity, provided effective results. Employing an agroforestry system of farming and creating a credit union empowered the local communities by building confidence and mobilizing grassroots efforts to support rural development programs and prevent deterioration of the quality and quantity of forest. These findings provide a new perspective of Rare's operations and reliability concerning environmental conservation campaigns in developing countries.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	iv
ABSTRACT	v
TABLE OF CONTENTS	vi
Chapter	
1. INTRODUCTION	1
1.1 Imperative Need: Hegemonic values working against conservation	2
1.2 Environmental Communication: Addressing Hegemonic Values	3
2. LITERATURE REVIEW	7
2.1 The Grim Status Quo of Global Environmentalism	7
2.1 a <i>Environmentalism in Developing Countries</i>	9
2.2 Indonesia - Southeast Asia's Geographic Jewel	11
2.2 a <i>Indonesia's Natural Resources</i>	12
2.2 b <i>Indonesia's Economic Distress</i>	13
2.2 c <i>Futile Efforts in Forest Protection</i>	14
2.3 Non-Governmental organizations	15
2.4 Rare	16
2.5 Culture - Perspectives on Biodiversity and Society	18
2.6 Communication Theory	20
2.7 Social Marketing Concepts	22
2.8 Environmental Campaign Design	24
3. METHODOLOGY	28

3.1 Master’s Program through UTEP Partnership with Rare	29
3.2 The “Pride” Campaign.....	30
4. ANALYSIS OF RARE’S BROP AND CAMPAIGNS	33
4.1 Rare’s BROP	33
4.2 Agroforestry	34
4.3 Campaign Analysis	36
4.3 a Campaign #1	36
4.3 b Campaign #2	38
4.3 c Campaign #3	40
4.3 d Campaign #4	41
4.3 e Campaign #5	44
4.3 f Campaign #6	46
4.3 g Campaign #7	49
4.4 Credit Union Campaigns	53
4.4 a Campaign #8	54
4.4 b Campaign #9	56
4.4 c Campaign #10	58
4.5 Local Adaptation	59
4.6 Monitoring Success	61
5. CONCLUSIONS	63
5.1 Rethinking Environmental Conservation	64
5.2 Local Adaptation Responses	65
5.3 The Future	66

LIST OF REFERENCES68
CURRICULUM VITA72

CHAPTER 1

INTRODUCTION

Indonesia, like the rest of Southeast Asia, takes its place on the world stage as a country of natural beauty and intriguing culture. It is at a crucial stage in its modern political and economic history (Bryant, 2001). But, as is usually the case with most developing nations, it finds itself facing a multitude of problems. Opposing forces are constantly at work, such as its government struggling to make Indonesia a modern nation and the economic demands of a growing population. Developing countries in the process of modernization, such as Indonesia, “are under pressure to deal simultaneously with a variety of environmental problems, including industrial pollution, urban environmental issues, the deterioration of ecosystems, and global warming, while at the same time they are expected to achieve further economic development” (Taguchi, 2001, p. 263). People need to first survive and then prosper, so the environment suffers the consequences.

Environmental issues are a concern that led to the first steps of conservation at the end of the nineteenth century. In the beginning, environmental protection in the U.S. manifested itself in the establishment of several national parks, followed by the first international conferences and the foundation of international environmental organizations (Scherrer, 2009). Soon afterwards non-governmental organizations (NGOs) were created to undertake a vast array of issues from human rights, poverty alleviation, and environmental protection (Scherrer, 2009). Alarming rates of deforestation for personal economic gain with no regard for the long term consequences is a major concern of NGOs worldwide.

An organization named Rare is at the forefront in addressing global environmental problems. Rare is a Washington D.C. based NGO focused on preserving endangered species, the habitats that sustain them, and the people who live amidst them. Its aim is to inspire people on a local level to care and protect nature in different parts of the world. Research for this project was conducted to study Rare and its collaboration with its partners in Indonesia. A crucial and key factor used by Rare in its environmental campaigns is known as the “barrier removal operation plan” – BROP. The focus of this study is to see how Rare’s BROP steps in the environmental conservation campaigns in Indonesia are implemented to engage, motivate, and involve the constituents at the local level. Protecting and conserving forest and all natural habitats is an ongoing process that can always be expanded in order to remain in contention in the race to protect what is precious and priceless not only in Indonesia but throughout the planet. In particular, Rare’s BROP helps its campaign managers produce results – driven campaigns that focus on conservation success.

Imperative Need: Hegemonic values working against conservation

The hegemonic discourse of modern society has been centered on the ideographs of nature, progress and industrialism (DeLuca, 1999). The discourse of hegemony represents the prevailing communication and rationale of ideas and information, such as the social, cultural, ideological, and economic influence and authority exerted by the dominant group. Kevin DeLuca challenges the hegemonic discourse of the industrial modern society: “Humanity (universalized Western rational ‘man’), by dominating nature (storehouse of resources, mechanistic object) through the use of reason (instrumental reason, science) and technology (autonomous and inevitable), will achieve progress (security, autonomy from nature, overcoming scarcity, ever increasing standard of living).” (1999, p. 45)

“We live in an era of unprecedented growth and change. Every facet of our daily lives has been changed by technology – from how we work, travel, and obtain food, to creating and maintaining social relationships” (Schultz, 200, p.1). Challenges have come with this growth and changes. One prevailing challenge today is brought about by the consumptive lifestyles of a modern society on the natural environment (Schultz, 2002). “As populations and economic development grow, vital biological resources such as forests and grasslands come under increasing stress” (Ezeonu, 2004, p. 33). “The Brundtland Report – named after the World Commission on Environmental Development (WCED) Commissioner Gro Hardern Brundtland – succinctly set out the challenge of feeding future world populations while maintaining the health of our water, soils, and biodiversity in an increasingly globalizing and urbanizing world economy” (Rhoades, 2001, p. 3).

Environmental Communication: Addressing Hegemonic Values

“Although the public’s concern for the environment is significant, considerable differences exist among individuals over how society should solve environmental problems” (Cox, 2010, p. 4). Complex environmental issues, such as deforestation, air pollution, and toxic waste, encumber public accord. “There exists, then, a dilemma. Although in one sense, nature is silent, others – politicians, business leaders, environmentalists, and the media – claim the right to speak for nature, or for their own interests in the use of natural resources” (Cox, 2010, p. 4). Humans’ misunderstanding of their connection to the environmental creates a prevalent problem in today’s society. As long as the changes occur gradually, people will “adapt to their surroundings and are unlikely to detect the changes” (Schultz, 2002, p. 2). “The environmental problems are caused by human behavior and solving these problems will require changes in behavior” (Schultz, 2002, p. 2).

The environmental ramifications due to human behavior have raised public awareness, mainly in part by critical rhetoric – the effective use of language to criticize the status quo. Author, professor, and environmental advocate Robert Cox (2010) defines critical rhetoric as “the questioning or denunciation of a behavior, policy, social value, or ideology; such rhetoric may also include the articulation of an alternate policy, vision, or ideology” (p. 228). Raymie McKerrow (1998) describes critical rhetoric as the discourse of unmasking and demystifying the dimension of domination exercised in a relativized world. “As Marx (1843) put it, a critique serves as ‘the self-clarification of the struggles and wishes of the age’” (as cited in McKerrow, 1998, p. 92). John Murphy (1995) proposes that critical rhetoric be “the language of criticism and critique to inform each other so that” the audience of intent can move to more a favorable consensus (p. 3).

Critical rhetoric, by questioning and denouncing specific human behavior, has brought much needed attention to the problems facing the environment. As a primary example, Cox (2010) uses biologist Rachel Carson’s (1962) book *Silent Spring*, which describes the poisoning of birds as “contributing directly to society’s ability to recognize and respond to the threat of dangerous agricultural chemicals” (p. 2). Critical rhetoric can be non-verbal as well. It can be visual, such as art, photos, video, film, and other symbolic actions. Some notorious images, such as pup seals lying dormant on blood-stained ice, drowning polar bears desperately seeking reprieve on a floating ice sheet, or the senseless removal of a shark’s dorsal fin then discarding the entire body back into the sea, are aimed at the public’s sensibilities to provoke a reaction and garner support for environmental plights.

However, it is not enough to be shocked and horrified at the environmental atrocities being committed by humans. Critical rhetoric serves as a crucial first step in bringing attention

to an environmental issue, but more is needed. We must move beyond simply questioning a policy and/or human behavior. In some cases, supporters of a cause may succeed in changing beliefs and attitudes of a constituency group, but will not succeed in changing the behavior of an intended audience group. This is known as “attitude behavior gap”; even though people may be aware of a problem, such as deforestation or global warming, they may not feel any urgency to change their behavior (Cox, 2010). As literary critic Stanley Fish (2008) points out in the *New York Times* article - I am, therefore I pollute, “...it is possible to believe something and still resist taking actions your belief seems to require” (para. 9). In an extensive review of literature on theories and AIDS campaigns, Freimuth (1992) “concluded that knowledge is not a sufficient condition for behavior changes” (as cited in Airihbuwa & Obregon, 2000, p. 10).

Through the use of communication, it is possible to mobilize people to create action (Castillo, 2000). It is through social and symbolic modes that we understand and engage this world, infuse it with significance, and act toward it (Cox, 2010). An effective plan to affect positive results and reach objectives and goals would be essential in changing behavior. Such a plan can be implemented using an advocacy campaign which “can be broadly defined as a strategic course of action involving communication that is undertaken for a specific purpose” (Cox, 2010, p. 229). NGOs around the world have adapted such advocacy campaigns to bring about concrete outcomes concerning all types of environmental issues. The campaign is the form of advocacy most frequently used by local and national environmental groups to accomplish an objective, be it ending logging in a national forest or species preservation.

The intent of this thesis is not to determine the success or failure of the Indonesian environmental conservation campaigns but rather serve as a study on how Rare’s BROP steps are implemented to engage, motivate, and involve the constituents at the local level. The focus is on

how Rare uses BROOP as the “behavioral change” strategy needed in the environmental campaigns to ensure effective participation at the local level. The following questions are addressed: What are the objective(s) to be met in environmental campaigns? Who are the relevant constituents to be educated and mobilized to bring about these objectives? What are the strategic/implementation steps employed to reach the desired results? How effective will these applied strategic steps be in overcoming the obstacles hindering “behavior change”? Will these strategic steps engage, motivate, and involve the local community to implement the necessary changes?

CHAPTER 2

LITERATURE REVIEW

In the middle of the 20th century, we saw our planet from space for the first time. From space, we see a small and fragile ball dominated not by human activity and edifice but by a pattern of clouds, oceans, greenery, and soils. Humanity's inability to fit its activities into that pattern is changing planetary systems fundamentally. Many such changes are accompanied by life threatening hazards, from environmental degradation to nuclear destruction. These new realities, from which there is no escape, must be recognized – and managed.

Our Common Future (as cited in Rhoads, 2001, p. 3).

The Grim Status Quo of Global Environmentalism

Earth First!, an environmental justice group, posed the question, “Why Wilderness?” In answering this question, Earth First! offered the following: “All natural things have intrinsic value, inherent worth. Their value is not determined by what they will ring up on the cash register . . . They are. They exist. For their own sake. Without consideration for any real or imagined value to human civilization” (as cited in Cox, 2010, p. 250).

Humans have contributed tremendously to the depletion and extinction of some wildlife, while many others remain endangered (Ezeonu, 2004). Animals have a right to live and have intrinsic value, not merely economic value (DeLuca, 1999). John C. Sawhill, president of The Nature Conservancy, wrote a column in the *New York Times* “arguing for continued protection of endangered species, even if it affects economic growth” (DeLuca, 1999, p. 51). In his defense, Sawhill proposes “to preserve species for what he terms, our ‘genetic warehouse’, for which he claims that seemingly useless species have proved to have important, even essential application”

(DeLuca, 1999, p. 51). He adds that “species diversity is a renewable resource with direct and indirect economic potential (DeLuca, 1999, p. 51). Cohen provides the following insight, “the earth’s plants, animals, and natural ecosystems provide goods and services that underpin human prosperity and survival” (2002, p. 255). He adds that, “in scientific terms, we usually call this the earth’s biological diversity – ‘biodiversity’” (2002, p. 255). According to Cohen, people are grossly exhausting the earth’s biodiversity. He claims that “under business-as-usual scenarios, only a few short decades remain before mass extinctions and wide-scale ecological collapse exceeds critical thresholds” (Cohen, 2002, p. 256).

In the analysis of “sociologizing” environmental protection, conservationist Ezeonu offers the following:

All living species live within the Earth’s environment, but humans have the most sophisticated and calculated ways of interacting with it. Humans can adapt to a great variety of environmental conditions – from hot, sandy deserts to the coldest ice fields. Equally, only humans can savagely ruin their environment in the most inconceivable manner, in pursuits of their ambitions, illusions, and delusions (2004, p. 33).

Never before in human history has humankind had the capacity to destroy the environment and to reduce the options of the next generation as today (Ezeonu, 2004). As Ponting (1991) said, “throughout history, human activity has impacted surrounding environments (Schultz, 2002, p. 1). Environmental problems affect all living beings on this planet; fauna, flora, and humans alike (Schultz, 2002). Hertzgaard claimed that “by the end of the 20th century, it was clear that the lifestyles of the industrialized countries were not sustainable” (Schultz, 2002, p. 1). Ezeonu claims that, “the continuous disposal of industrial wastes and other pollutants on the environment will eventually go beyond the capacity of the Earth to absorb” (2004, p. 33). Revelle and

Revelle (1988) in their analysis between the industrialized North and the developing South, provided the following insight, “one of the most fundamental principles is that humans cannot continue to exploit their ecosystem endlessly, but must learn to live within natural boundaries imposed by the environment (Ezeonu, 2004, p. 35).

All around the world environmental problems such as deforestation, loss of biodiversity, and pollution continue to increase at alarming rates regardless of the number of investigations reflected in journals and publications (Castillo, 2000). Despite multilateral agreements signed by the international community to protect the global environment, industrialized countries continue to wreck the environment in mindless pursuit of economic profit and military superiority (Ezeonu, 2004). Forests continue to decline steadily toward local and regional crisis levels even though their importance is well-known to scientists and environmentalists (Lang & Chan, 2006). As populations and economic development grow, vital biological resources like forests and grasslands come under increasing stress (Ezeonu, 2004). This is much more evident in developing third world countries where people “are struggling to meet basic life needs in the face of dwindling natural resources” (“Conservation on a human scale”, n.d., para. 1).

Environmentalism in Developing Countries

“A number of scholars have suggested that relations between society and the environment around the globe follow a customary developmental path. One of the most powerful means of analyzing this pattern involves the concept of ‘natural environmental transitions’” (Dove, Sajise, & Doolittle, 2005, p. 8). Panayotou (1994) and Mather (1990) have argued that all nations progress through their economic development through what they call a “forest transition” in which the countries first degrade and then restore their forests; in fact this transition involves all natural resources (Dove, et al., 2005). Developing countries presently face two kinds of

challenges: economic development and environmental conservation. The efforts of East Asian countries often lack the capacity to enforce environmental laws and standards and to disseminate new technologies nationwide (Taguchi, 2001). This correlation between the early phases of economic growth in a nation and environmental degradation is in accord with one of the fundamental findings of environmental conservation studies, namely, that there is an association between the dynamics and integrity of a society and the dynamics and integrity of the environment (Dove, et al., 2005).

It seems significant to target East Asian countries which are at different stages of development because they face environmental policy challenges in the process of industrialization (Taguchi, 2001). The 1992 Earth Summit in Rio de Janeiro advocated seeing material poverty as a condition which limits people's capacity to use "natural assets" (such as soil, water and forests) sustainably (Rhoades, 2001). As Revelle and Revelle (1988) described, this situation positions the rights of the poor and growing human population against the rights of wild plants and animal species (Ezeonu, 2004). The right of the local people struggling to feed and live with dignity is paramount in this regard. "Local people possess the inalienable right to eat whatever they have to in order to survive in their own environment" (Ezeonu, 2004, p. 38). "When they need to burn wood, they will cut down trees; when they need to feed their starving livestock, they will overgraze pastures; and when their own food resources are no more, they will have no choice but to attack wildlife" (Ezeonu, 2004, p. 38).

The decline of forests is also not equally distributed among countries. Most developed industrial societies, the northern hemisphere, have stabilized their forests. But the causes of pollution, environmental degradation, and resource depletion are a combination of over-population in the southern hemisphere and over-consumption in the northern hemisphere.

Ironically, the population in the north is placing the heaviest stress on the environment. Miller (1990) reports that “with less than 26 percent of the world’s population, the Northern hemisphere accounts for 80 percent of the world’s resource consumption and environmental pollution” (as cited in Ezeonu, 2004, p. 36). Lang and Chan claim that “the increased control over the developed countries own forest exploitation leads to displacement of demand for the forest products ‘offshore’ to other regions, and further increases the pressure on forest in developing countries” (2006, p. 168). China’s growing market for forest products from Southeast Asian countries, along with the impact of the 1998 logging ban in China, is the leading cause of increased exploitation on the forests in Malaysia and Indonesia (Lang & Chan, 2006).

Indonesia - Southeast Asia’s Geographic Jewel

Indonesia, composed of approximately 17,000 islands forming the largest archipelago in the world, can boast of its unique geographical makeup (The State of the Forest: Indonesia, 2002). Stretched along the equator on both the north and south sides, it benefits from a tropical climate. The tropical rainforest covering peaks and valleys, ancient volcanic mountains- some dormant and others active, and luscious basins cut by rivers flowing narrow and wide, create part of its intrigue and appeal. Its mangrove forests are the most extensive in the world and of course, its endless sight of coastline surrounding the many islands, definitely warrant admiration and awe (The State of the Forest: Indonesia, 2002). It contains “the third largest block of tropical forest after the Amazon and Congo basins” (Lang & Chan, 2006). Yet, all this beauty is in danger of being lost forever. What has taken nature millennia to create; humans are destroying in a period of a few decades. Much is at stake, not only for the people of Indonesia but for the entire world.

Indonesia's Natural Resources

From the point of view of life on earth, forests are the planet's second most important resource after oceans. They regulate climate, control water cycles, shelter most land-based animals, and provide innumerable benefits to humans (Lang & Chan, 2006). The truth is that tropical forests are a resource wealth for the poor. Forests play an important ecological role in the biodiversity of the planet. Tropical rain forest habitat in many parts of the developing world is home to a staggering number of species (Ezeonu, 2004). Thus, large-scale deforestation contributes to global climate changes, poor food production, extinction of plant and animal species, and increase in the average sea levels.

The current state of Indonesia's tropical forest is in dire straits. It is experiencing one of the highest rates of tropical loss in the world. It is losing nearly 2 million hectares of forest every year (The State of the Forest: Indonesia, 2002). The China Internet information center estimated that as much as 50 million cubic meters of Indonesian timber is cut illegally each year (Lang & Chan, 2006). This is especially significant because of the importance of Indonesian forests – comprising about 10% of the planet's remaining tropical forest and because of the rapid loss of those forests over the past 50 years (Lang & Chan, 2006). According to Toyne et al. (2002), “about 73% of the timber exports were not legal in the 1990s, and the annual illegal cut reached 15 million cubic meters in the mid-1990s (as cited in Lang & Chan, 2006, p. 176). Toyne et al. (2002) also claimed that “from 1950 to the mid-1990s, the forest area in Indonesia declined by about 40%, from an estimated 162 million hectares to 98 million hectares” (as cited in Lang & Chan, 2002, p. 175). Febrian (2004) estimated that “the annual rate of forest destruction in Sumatra, Kalimantan and Sulawesi was 1.6 million hectares on average from 1985 to 1997” (as cited in Lang & Chan, 2006, p. 175).

The Environmental Investigation Agency (EIA) purports that “ramin, a vulnerable timber species found only in Indonesia and Malaysia and widely used in products such as wooden blinds and kitchen cabinets, was illegally logged in large amounts especially from the Tanjung Putting National Park in Kalimantan (Lang & Chan, 2006, p. 176). When interviewers from EIA interviewed two employers of import and export companies, one of them even responded: “this (ramin) smuggling is better than drug smuggling” (Lang & Chan, 2006, p. 177). Most of the illegal timber has been shipped to developed countries such as Japan, the United States and the United Kingdom, or developing countries such as China (Lang & Chan, 2006). Indonesia also has exported other types of timber such as plywood, logs and lumber. Lowland dipterocarp forests, the richest in timber resources and biodiversity, are most at risk (The State of the Forest: Indonesia, 2002). The largest exports from Southeast Asia are from Indonesia. It is estimated that by as early as 2010, these forests will vanish from Sumatra and Kalimantan (The State of the Forest: Indonesia, 2002). This scale and speed are unprecedented.

Indonesia's Economic Distress

Given Indonesia's history of corruption, poverty, and political uncertainty, economic problems perpetuate Indonesia's developing status. Apart from government mismanagement, the economic dependence on direct and indirect processing industries is also a key factor leading to the failure of logging bans (Lang & Chan, 2006). With the increasing number of pulp and paper industries, employment expanded leading to increased dependency of the local and national economy on forest-related industries (Lang & Chan, 2006). The collapse of forest-related industries would lead to a substantial increase in unemployment and increased potential for social instability. The Indonesian economy would be significantly affected if a logging ban was imposed and strictly enforced. Deforestation occurs not only because of predatory elites, but

also for the sake of social stability in areas where communities have become dependent on income from exploiting forests (Lang & Chan, 2006).

Another reason for destroying tropical forests in Indonesia is the clearing of space for palm oil – to meet world demand - plantations, which lack many of the ecological functions of natural forests (Lang & Chan, 2006). Adding to the seemingly unending degradation of Indonesia’s forest is the encroachment and illegal logging in its national parks. Indonesia’s national parks, never very well protected in the first place, “have suffered almost total neglect since the Asian financial crisis of 1997” (There be dragons, 2003, p. 1). The government’s budget for conservation has plummeted by 80%. The countries’ underpaid and ill-equipped park rangers have little incentive to do their jobs properly. They even participate in the some of the practices they are supposed to protect form – illegal logging, poaching and encroachment on land – that are fast destroying Indonesia’s national parks (There be dragons, 2003). In Indonesia, “the weaker capacity to regulate, monitor, and enforce forest management is compounded by corruption, which is related to poverty and regimes of exploitative governance” (Lang & Chan, 2006, p. 183).

Futile Efforts in Forest Protection

“Laundering” of illegally cut wood in Southeast Asia is quite sophisticated and there is currently no very effective way to track and police the routes of most wood products from the sources to the importing countries (Lang & Chan, 2006). Some local communities do resist incursions from outside forest exploiting groups seeking windfall profits, but this seems to be relatively unusual. It occurs only if the local community has achieved a satisfactory and stable economic livelihood without resorting to tree cutting. Local communities are not reliable allies

in attempts to protect local forests when profits for exploiters are high, and incomes from logging and related occupations are much higher for local people than any alternative local employment (Lang & Chan, 2006). Large-scale efforts are needed to bring about the necessary changes to stem the flow of forest exploitation.

The Indonesian government announced several logging bans in 2002, along with forestry regulatory activities such as listing ramin as endangered tropical tree species. But the internal problems of corruption and the collision of local elites with the logging operations have been exacerbated by the political decentralization which followed the fall of the Suharto regime in 1998 (Lang & Chan, 2006). “There has been a great deal of activity devoted to searching for solutions specifically adapted to Indonesian problems and needs, particularly, through the Consultative Group on Indonesia (CGI) which has met regularly since 1998 to try to plan, coordinate, and fund programs to assist the government’s own efforts” (Lang & Chan, 2006, p. 184). While assisting countries such as Indonesia is important, it is not going to solve the problem of massive and unsustainable loss of forests.

Non-Governmental Organizations

NGOs are involved in many decision-making processes in prominent fields such as human-rights, poverty alleviation and environmental protection (Scherrer, 2009). “Increasingly development theorists and practitioners view NGOs as catalysts of sustainable development” (Tahkokallio & Nygren, 2008, p. 345). Environmental NGOs promote changes with regard to the relationship between humans and nature. Former *New York Times* writer Philip Shabecoff (2000) argues that a chief role of environmental groups is to act as “intermediaries between science and the public, the media, and lawmakers” (as cited in Cox, 2010, p. 152). A relevant

role played by NGOs is that of functioning as a link between science and rural producers of society, such as agriculturists, cattle ranchers, forest extractors, hunters, gatherers, and fishermen (Castillo, 2000). NGOs also provide a link between the governmental institutions that remain largely responsible for providing crucial services like health and education (Castillo, 2000).

The growing concern about environmental degradation and the challenges of tackling both the ecological and human dimensions of development problems have created high expectations of environmental NGOs as potential channels for addressing the complexity of environment-development problems in Southeast Asia (Tahkokallio & Nygren, 2008). As indeed they are in many other parts of the world, NGOs are important players in Southeast Asian environmental management, but they continue to face laborious challenges as they try to go about their business of promoting social and environmental change (Bryant, 2001). NGOs in Indonesia and around the world have been managing conservation programs in some of the principal islands of the archipelago. The list of international NGOs in Indonesia is extensive; some of the most recognized are Conservation International, Minister of Forestry, the Nature Conservancy, UNESCO, Wildlife Conservation Society, and World Wildlife Fund among many others. It is likely that NGOs will continue to face stiff challenges as they try to go about their business of promoting social and environmental change (Bryant, 2001).

Rare

The name of the organization Rare is quite fitting since it is definitely unique among the other international conservation groups. As its C.E.O., Brett Jenks, notes that, “conservation is about people” (“New Period”, n.d., para. 7). While many large organizations are working top-down on international regulations and corporate buying practices, Rare is focused on supporting

their work from the bottom up (“Our Programs”, n.d., para. 3). “This means reaching millions of people who live in and around areas containing the highest levels of biodiversity ... people whose day-to-day behaviors, livelihoods, and culture will greatly impact how well global conservation projects are sustained long term” (“Our Programs”, n.d., para. 3). This is what makes Rare different and sets it apart from other organizations. Rare does this by putting people first, by inspiring conservation among the local communities in which species and habitats are threatened. It is all about the people, from the local nature guides to the individuals at large NGOs, from campaign managers to home office staff, from local entrepreneurs to Rare’s board members.

“Rare’s mission is to conserve imperiled species and ecosystems around the world by inspiring people to care about and protect nature” (“Mission”, n.d., para. 3). Rare’s entire model is built on training local partners to implement campaigns and sustain long-term threat reduction (“Rare”, n.d., para. 10). Rare collaborates with local NGOs already working in the targeted countries and locally recruits from these lead organizations to train and manage conservation programs. It supports these local leaders as they work in their own unique communities. Rare is committed to helping all partners sustain social and behavioral change in the long term. With a focus on reducing human-related threats to biodiversity, the “local partners use Rare social marketing techniques to tackle deforestation, unsustainable agriculture, illegal hunting, destructive fishing, and lack of support for protected areas in some of the most ecologically significant corners of the globe” (Summary of Achievements, 2008, p. 2).

In 2008, Rare supported local conservation campaigns in 24 countries, reaching millions of people living in threatened natural areas (Summary of Achievements, 2008, p. 2). Rare was involved in ten “land cohort” conservation campaign programs in Indonesia. These campaigns

were located on some of the largest islands in Indonesia: Sumatra, Java, Borneo, Kalimantan provinces, as well as the tourist-famous island of Bali.

Culture - Perspectives on Biodiversity and Society

To quote Guneratne, “Culture is the symbolic system that allows us to interpret, give meaning to, and act in the world” (2008, p. 112). In addition, “one of the most fundamental aspects of culture is the relationship it has between the individual and the environment” (Schultz, 2002, p. 1). Differences in attitudes about environmental issues are present across cultures. The importance of culture in the development and implementation of communication programs should be addressed since culture is the people’s ability to control and dominate their environment (Airhihbuwa & Obregon, 2000). As Rhoades observed, “Cultural beliefs about ‘appropriate’ behavior critically shape how people feel free to, or are allowed to, engage in knowledge generating events” (2001, p. 319). Rhoades discusses the collaboration of knowledge between villagers and project professionals:

Social actors interact, negotiate and accommodate to each other’s life-worlds, leading to the reinforcement or transformation of existing types of knowledge or to the emergence of new forms. These processes and outcomes are shaped by sources of power, authority and legitimation available to the different actors involved (Rhoades, 2001, p. 318, citing Arce & Long).

Campaign planners need a greater understanding of their “audience of intent”, which often belongs to a culture and a social class different from theirs. According to Ellen (1999), “the Western conservation paradigm, in which people are removed from an ecosystem in order to protect it, is illogical in the context of Indonesia and other countries. The way in which people

conceptualize their natural environment indeed depends on how they use it, how they invest knowledge in it through their actions” (as cited in Dove, et al., 2005, p. 10). It is not surprising that the Western model of exclusionary national parks has often failed in non-Western parts of the world (Dove, et al., 2005). Airhihbuwa and Obregon (2000) propose that, “Western cultures, to varying degrees, tend to view the self as a production of the individual, whereas many other cultures view the self as a production of the family, community, and other environmental influences for which we do not have, nor desire, total control” (p. 7).

Complementing the term landscape – the complex, interactive processes within and between the individual ecosystems of topography - is the notion of “lifescape” (Rhoades, 2001). This new term “includes economic, cultural, and social aspects in interaction with the physical and biological dimensions of the ecosystem” (Rhoades, 2001, p.8). Nazarea points out that, “A lifescape can be visualized as the superimposition of human intentions, purposes, and viewpoints over environmental features and the resulting patterns of production, consumption, and distribution” (as cited in Rhoades, 2001, p.8). Daily life is almost entirely affected by not only land’s physical property but also from the multiple ways farmers, ranchers, loggers, and others have encountered, constructed, and represented it over time (Rhoades, 2001). For example, the Penan Benalui tribe of Borneo, not only reaps the bounty of the land but also help manage forest biodiversity. They manipulate the distribution of fruit trees, sago palms, and grasslands. They prune and manage their agricultural sites (Dove, et al., 2005). The Batek tribe of Malaysia believes that active, local human management of resources is crucial to ecosystem health (Dove, et al., 2005).

Another important characteristic of culture according to Airhihbuwa and Obregon, is that “culture is the observable aspect of individual behavior that is understood better by locating

behaviors within the individual beliefs” (2000, p. 8). In fact, Good proposes that “belief and knowledge are thus constructed as binarism and belief invariably becomes a code for culture, a barrier that must be overcome” (as cited in Airhihbuwa & Obregon, 2000, p. 7). It is evidently clear that culture directly affects the nature of communication and behavior in a society.

Communication Theories

It is impossible to separate our knowledge about environmental issues from communication itself. As environmental communication scholars James Cantrill and Christine Oravec make clear, the “environment we experience and affect is largely a product of how we come to talk about the world” (as cited in Cox, 2010, p. 2). Communication is a process in which participants create and share information with each other in order to reach a mutual understanding (Rogers, 1995). According to Cox, “the way we communicate with one another about the environment powerfully affects how we perceive both it and ourselves and, therefore, how we define our relationship with the natural world” (2010, p. 2). Long and Long proposed that a communication model should emphasize the need for exchange of information between the participants and open up the possibility of social encounters for joint creation of new knowledge (Castillo, 2000). “Theories, models, and frameworks are designed to guide the implementation and evaluation of programs along certain processes that are believed to yield an expected outcome” (Airhihbuwa & Obregon, 2000, p.5). Communication theories and models could be applied to help deal with environmental issues in regards to human behavior. A brief overview of some pertinent theories/models - positive deviance, diffusion of innovations, and social marketing - is given in the following paragraphs.

The Positive Deviance Initiative (PDI) provides the following theory description

summarizing the principle points:

Positive Deviance is based on the observation that in every community there are certain individuals or groups whose uncommon behaviors and strategies enable them to find better solutions to problems than their peers, while having access to the same resources and facing similar or worse challenges. The Positive Deviance approach is an asset-based, problem-solving, and community-driven approach that enables the community to discover these successful behaviors and strategies and develop a plan of action to promote their adoption by all concerned (“What is Positive Deviance?”, n.d., para. 1)

The theory’s idea emerged from the concept of “deviants” doing much better than the majority in a given setting. Jerry Sternin decided to use an “amplified positive deviance” approach involving eight steps (Dorsey, 2007). The first step is to not presume you have the answer. The second step: When defining the community that you want to change, you shouldn’t mix people from different social groups or departments. Step three: Let them do it themselves (Dorsey, 2007). Set up a situation in which people – including those who need to change the way that they operate – can discover, on their own, a better way to do things. Step four: Identify conventional wisdom (Dorsey, 2007). First understand clearly what the accepted behavior is. Establish what it is that most group members do. Step five: Identify and analyze the deviants (Dorsey, 2007). As you begin to list the behaviors that they all have in common, the positive deviants will naturally emerge. List the set of behaviors that the deviants have in common and single out exactly what makes them successful. Step six: Let the deviants adopt deviations on their own (Dorsey, 2007). Don’t teach new knowledge – encourage new behavior. Let the people who have discovered the deviations spread the word in their group. Step seven: Track

results and publicize them (Dorsey, 2007). Post the results and show how they were achieved. Step eight: Repeat steps one through seven. Make the whole process cyclical (Dorsey, 2007).

Another theory that is able to provide some insight on environmental communication issues is diffusion of innovation. Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system (Rogers, 1995). Diffusion is a special type of communication concerned with the spread of messages that are perceived as new ideas. E. M. Rogers (1995) argued that it consists of four stages: invention, diffusion (or communication) through the social system, time, and consequences.

Social marketing is an “organized approach to promoting acceptability of a social idea” according to Airhihbuwa and Obregon (2000, p. 4). Regarding the limitations of social marketing, “Smith’s evaluation of social marketing indicates that product social marketing has been used widely and praised, where as relatively little effort has gone into behavior social marketing (using social marketing to change and maintain behavior change)” (as cited in Airhihbuwa & Obregon, 2000, p. 4).

Social Marketing Concepts

Social marketing has been used for years to successfully tackle a large variety of issues, such as smoking, HIV-AIDS, and seatbelt use, but it has not been fully used in the realm of conservation (“Our Programs”, n.d., para. 3). Social marketing is the “planning and implementation of programs designed to bring about social change using concepts from commercial marketing” (Social Marketing Institute, n.d., para. 1, Cox, 2010). Social marketing emphasizes the motives of the target audience in encouraging behavior change (Cox, 2010). The

conservation field is becoming more and more focused on mastering the art of social and behavioral change (“A First-of-its-Kind”, n.d., para. 1). Rare has a proven model for changing awareness, attitudes, and behaviors toward conservation at the local level – an arena in which Rare has practiced for more than 35 years (“Our Programs”, n.d., para. 1).

Rare and its partners face many challenges managing the environmental conservation projects, as does the country of Indonesia. So how does Rare succeed in the arena of international environmental conservation in light of all the ever-present obstacles? The true key to Rare’s success lies in social marketing (“About Rare”, n.d., para. 1). “Rare is the leader in social marketing for biodiversity conservation — with a successful track record in more than 50 countries to date. We train and support leaders from the world’s top environmental organizations, local grassroots groups, and governments – all of which are increasingly aware that failure to create support at the community level reduces the chance of conservation success” (“Our Programs”, n.d., para. 1).

Environmental advocacy campaigns share some characteristics of information campaigns and social marketing. Everett Rogers and Douglas Storey identified four features shared by most campaigns (Cox, 2010). First, a campaign must be purposeful. It should have specific and concrete outcomes established from the communication efforts of the campaign. Second, a campaign should be aimed at a large audience. It should be an organized effort intended to persuade a large number of people rather than just one person or a few people. Third, a campaign should have a specific, defined time limit. The target audience’s response to the objectives of the campaign, be it a vote, a change in diet, or preserving an endangered species, should be made by some specified date. Fourth, a campaign should involve a set of

communication activities. An example of this fourth feature is a message production and its distribution (Cox, 2010).

Environmental Campaign Design

Not content to rely simply on critical rhetoric, such as articles, personal testimony, and nature programs to educate the public, many environmental groups began to design advocacy campaigns to achieve specific changes (Cox, 2010). Cox credits Michael McCloskey, the former executive director of the Sierra Club, as one of the principal architects of the strategy used by advocacy campaigns. Cox (2010) cites a 1982 interview, where McCloskey reflected on his role in the environmental movement's shift from critical rhetoric to campaigns:

What I have emphasized has been a serious approach toward achieving our ends. I thought that we were not here just to bear witness or to pledge allegiance to the faith, but in fact we were here to bring that faith into reality . . . That means we could not rest content with having said the right things, or with having made our convictions known, but we also had to plan to achieve them. We had to know how the political system worked, how to identify the decision makers and how their minds worked. We had to have people concerned with all the practical details of getting our programs accomplished (p. 232).

McCloskey's perspective provides a "shift in thinking basically which basically shows the fundamental difference between critical rhetoric of 'having said the right things' versus the advocacy campaign's having 'a plan to achieve them'" (Cox, 2010, p. 232). This also reflected many environmental groups' interest in a more participatory approach to enable citizens to take part in decisions affecting their environments (Cox, 2010). So environmental leaders usually

ask, and then attempt to answer, three fundamental questions: what, who, and how. These three primary questions directly correlate to a campaign’s (1) objectives, (2) audiences, and (3) strategies (Cox, 2010, p. 232).

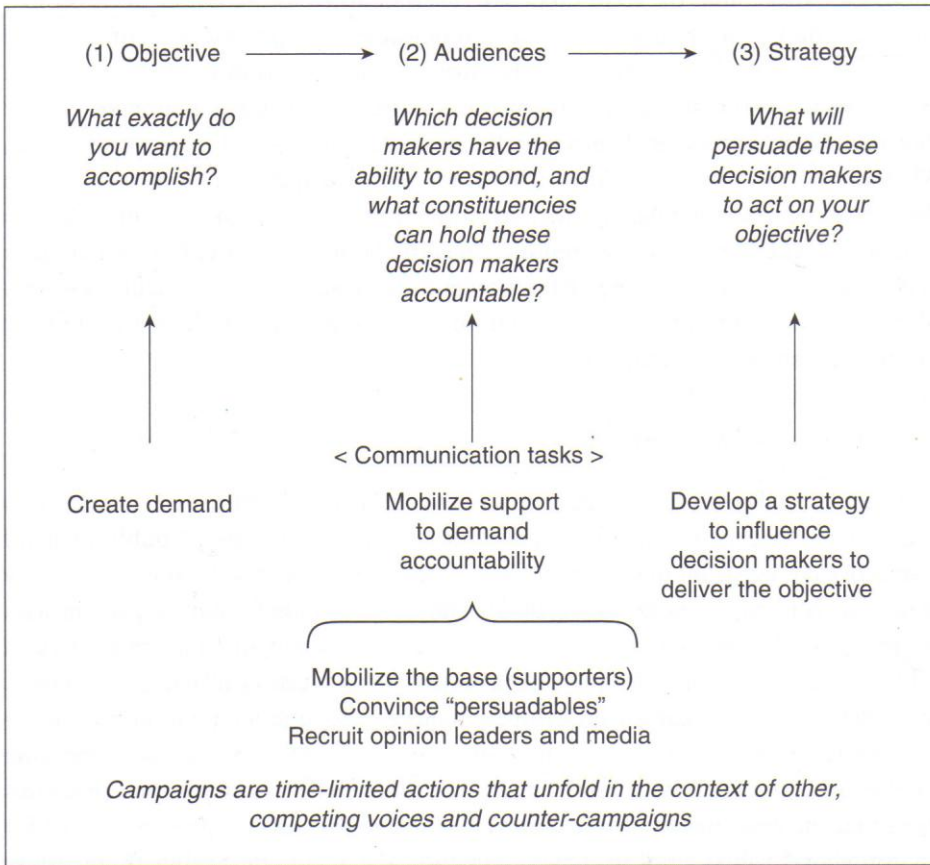


Figure 1. Design of the Environmental Advocacy Campaign Model.

Source: Cox (2010).

The design of the environmental advocacy campaign consists of three stages which directly correlate to three important corresponding communication tasks. The first stage deals with formulating the objective – “a specific action or decision that moves the group closer to achieving its broader goal” (Cox, 2010, p. 234). The objective should be clear, “concrete,

specific, and time-limited action or decision” (Cox, 2010, p. 234). A campaign can fail when the objectives are not clear or when it confuses a broad goal or vision with near-term, achievable, and specific actions or decisions. The first stage’s corresponding communication task is to create demand – “an active demonstration of support for the campaign’s objectives by key constituency groups” (Cox, 2010, p. 234). Environmental group’s training programs stress that the challenge of a campaign is to “translate the public’s passive support for environmental values into active ‘demand’ for action protecting those values (as cited in Cox, 2010, p. 234).

This new “demand” obligates a campaign to answer the second primary question of “who”. “Who are the relevant constituencies and supporters whom a campaign must educate and mobilize as part of its strategy” (Cox, 2010, p. 235)? This second stage focuses on identifying the audience of intent – primary and secondary. The primary audience is the decision makers and the secondary audience is the constituencies charged with holding the decision makers accountable (Cox, 2010). Cox claims that “a campaign cannot achieve an objective until someone with the ability or authority to decide on the objective responds favorably” (2010, p. 235). Its corresponding communication task is the campaign’s effort to mobilize the support in the first stage previously mentioned.

The third stage is to influence the decision makers. Its corresponding communication task is the development of a strategy to persuade the decision makers (Cox, 2010). This is usually the weak link in a campaign because often times it is overlooked and unclear. It is in this third stage of the “advocacy environmental communication design model” proposed by Cox where the analysis of this paper was focused. This study aims to illustrate how Rare’s BROP strategy supplements and reinforces Cox’s third strategy, which is responsible for persuading the decision makers to act on the objectives. In this third stage, Rare’s applied BROP strategies

serve as the specific plan to bring about the desired outcome of changing the audience of intent's behavior. BROP strategies influence the decision makers by closing-up the "attitude behavior gap" so often the cause of failed conservation programs initiated by environmental groups (Cox, 2010).

CHAPTER 3

METHODOLOGY

Teach you? I can't teach you, go and experience it yourself (Siddharta Gautama, n.d.) If one wants to experience the forest, one must go to the forest. It is only when one is in the presence of the trees that one can truly experience the forest. Keeping with the same philosophy, in order to gain an understanding and a true appreciation of the organization Rare, its collaboration with its partners, and the conservation programs they manage in Indonesia, one must go to Indonesia and meet and speak with Rare staff, its partners and campaign managers and visit the sites they work in. Such an opportunity presented itself at the Bogor Agricultural Institute (Institut Pertanian Bogor – IPB) in Bogor, Indonesia and at two of the national park reserves in Indonesia – Yayorin's campaign in Lamandau Reserve in Pangkalan Bun, in south central Kalimantan and Seka's campaign in Bali Barat National Park in Bali, Indonesia.

A group of 13 members traveled to Indonesia for a period of 3 weeks in June and July, 2009 to conduct field research and to meet campaign managers and Rare staff. During this period, the group visited Bogor Agricultural Institute to meet Rare's campaign managers, view their training program, and discuss their campaign approach. Two of the campaign sites were also visited to get a firsthand look at the implementation of the Pride campaigns. The approach for this thesis project was conducted using text analysis, Internet, data collection, and interviews. Rare's organization was examined to learn its structure, function, philosophy, and the system it uses to implement and manage its conservation campaigns, not only in Indonesia, but world-wide. Some of the partners that Rare collaborates with – campaign managers, program managers and NGO staff, were interviewed to obtain their personal perspective on Rare's program and

how it complements their conservation projects. Informal lectures and talks also provided crucial data on the study. Some of the campaign field locations were visited to get a first-hand account of the work being done and to collect information on the specific projects. Details were also gathered from talking to farmers, field guides, and national parks' staff and rangers. The research conducted throughout the three week stay in Indonesia focused on how Rare uses BROP as the "behavioral change" strategy needed in the environmental campaigns to ensure effective participation at the local level.

Master's Program through UTEP partnership with Rare

"Whether it's getting people to adopt more sustainable agriculture or to better manage a protected area, the conservation field is becoming more and more focused on mastering the art of social and behavioral change" ("Training", n.d., para. 1). "In partnership with the Department of Communication at the University of Texas-El Paso (UTEP), Rare has launched a first-of-its-kind training program that provides conservation practitioners with an M.A. (master's degree) in Communication" ("Training", n.d., para. 2). "Administered by regional university partners in four languages, and globally accredited by UTEP, the degree is awarded to Pride campaign managers who complete all required coursework, as well as implement a successful two-year Pride campaign at their site" ("Training", n.d., para. 2).

"Tying social change to conservation requires a wide range of tools and skills. This includes everything from threat analysis and multi-disciplinary strategic planning to marketing and messaging to project management and evaluation" ("How Rare provides training", n.d., para. 4). "The university curriculum is based on pedagogical theories, as well as Rare-specific strategies for creating an iterative learning program for the mangers" ("Training", n.d., para. 8).

“Rare provides continuous training and technical support throughout the two-year Pride campaign. The participants (campaign managers who are selected by Rare’s local partner organizations) spend approximately 17 weeks at the university, divided into three separate university phases. The campaign managers spend the remaining 84 weeks at their site implementing the campaign itself” (“How Rare provides training”, n.d., para. 5). “Assignments and reports are completed continuously over two years, and the final trip to the university includes a formal graduation, a final report, and the creation of a long term plan for sustaining impact” (“How Rare provides training”, n.d., para. 6). Participants in the UTEP-Rare program in Bogor, Indonesia come from Malaysia, Indonesia, and East Timor (“Training”, n.d., para. 9). “The cohort of campaign managers who started in October 2008 is the first to be eligible for UTEP and Rare’s new Master’s Degree in Communication” (“Developing the world’s first”, n.d., para. 4).

The “Pride” Campaign

Rare has developed a method “for changing attitudes and behaviors through the utilization of a program called a Pride campaign” (“About Rare”, n.d., para. 4). The name Pride was selected because it inspires people to take pride in the natural assets that make their communities unique and valuable and to take action to protect those assets (“Our Programs”, n.d., para. 2). Pride campaigns are intensive year-long marketing efforts that borrow private sector methods and apply them to social marketing tactics. The program focuses on building support for conservation at the local level. Pride campaigns involve and engage every segment of the community: teachers, business and religious leaders, elected officials, and the average citizen (“Our Programs”, n.d., para. 4). These stakeholders become an integral part of forming solutions that will best benefit their community. Rare approaches the lead organization - local

NGO - involved with the targeted theme, then it proceeds to recruit from that lead organization (Hari Kushardanto, personal communication, June, 25, 2009).

Based on their initial research, the lead organization then uses the SMART model to develop the objectives for the campaign. SMART is a well known method for setting objectives in a “smart” way. “SMART refers to the acronym that describes the key characteristics of meaningful objectives, which are Specific (concrete, detailed, well defined), Measureable (numbers, quantity, comparison), Achievable (feasible, actionable), Realistic (considering resources) and Time-Bound (a defined time line) (Setting SMART Objectives, 2006, para. 4). The SMART approach is well understood by many people, but is often poorly practiced. In order to better achieve one’s set goals, SMART objectives should be implemented.

Pride campaigns also utilize several social marketing tactics. One such tactic is a “mascot” symbol representing a campaign. Pride campaigns employ a charismatic flagship or keystone species which becomes a symbol of local pride and acts as a messenger to build support for habitat and wildlife protection (“Our Programs”, n.d., para. 4). This species is used as a sort of mascot to help create an identity for the project. This could be a bird or mammal from the targeted region. The lead organization usually recommends or proposes a keystone species for the campaign, which comes to symbolize the campaign and habitat, but only after gathering information and surveying the targeted region (Sarilani Wirawan, personal communication, n.d.). Other social tactics involve “audience segmentation; focus-group testing of highly targeted messages; use of multiple media vehicles and outlets to reinforce messages over a sustained period of time; and rigorous measurement of ‘product adoption’” (“Our Programs”, n.d., para. 2). Pride campaigns also use marketing strategies to make the conservation message positive, compelling, relevant, and fun for the community. Some of the tools used are “billboards,

posters, songs, music videos, sermons, comic books, and puppet shows” (para. 3, “Our Programs”, n.d.).

Rare uses “thematic cohorts”, focusing on one common environmental theme per campaign session, such as orangutan protection or marine conservation. These thematic cohorts were implemented by Rare in the past two years to better plan and focus on the specific environmental campaigns. Each Pride campaign is planned and implemented by a manager. Hence, each campaign manager is responsible for writing a BROP report detailing their environmental campaigns. Originally eleven BROP reports were collected from each of the campaign managers for this study. However, one of the Pride campaigns happened to be a “marine-based” campaign, a completely different theme from the other ten “land-based” campaigns. Incidentally, this campaign was located in Malaysia not in Indonesia, where the other ten campaigns are located. In order to remain consistent with the data analysis of the BROP reports, the study focused on only the ten Indonesian “land-based” cohort environmental conservation campaigns.

CHAPTER 4

ANALYSIS OF RARE'S "BROP" AND CAMPAIGNS

"Pride campaigns are based on social marketing – the use of private sector marketing tactics to 'sell' social change" ("Our Programs", n.d., para. 2) Rare and its partners learn how to change attitudes and behaviors; mobilize support for environmental protection; and reduce threats to natural resources. "Rare does not directly implement campaigns. It trains local organizations in social and behavioral change and then relies on them to add an essential understanding of local culture and social norms — as well as to sustain impact long term" ("Rare Pride", n.d., para. 6). The principal means of achieving the specific campaign objectives are by employing Rare's BROP strategy.

Rare's BROP

A model formula, derived from the basic communication model of sender, message channel, and receiver, stipulates that an increased knowledge (K) and attitude (A) plus interpersonal communication (IC) will lead to behavior change (BC), represented as $K + A + IC = BC$ (Hari Kushardanto, personal communication, June 25, 2009). This does not necessarily function as formulated. In order for people to truly change their behavior, the "barrier" must be removed. The barrier can be something psychological, technical, economic, or anything else that is preventing and/or hindering the change. Therefore, the following model formula is proposed by Rare: $K + A + IC + BR = BC$ (Hari Kushardanto, personal communication, June 25, 2009). The addition of BR, the "barrier removal", is necessary to complete the objective. Only after the "barrier" has been removed can true "behavioral change" take place to accomplish the proposed

objectives of the conservation project. “People are moved due to emotion, not intellect” (Sarilani Wirawan, personal communication, n.d.).

BROP is essential to the success of Rare’s conservation efforts. Rare developed BROP to be used as a tool to help the campaign managers target and implement a practical strategy that can be used to achieve the behavior change necessary by replacing the “unsustainable behavior” with “sustainable behavior” (Hari Kushardanto, personal communication, June 25, 2009). “Pride campaigns incorporate everything from social marketing to public relations; education to stakeholder engagement; and supporting alternative livelihoods to influencing legislation. All are designed to change the way people relate to nature, and partners use them to reduce threats to biodiversity” (“Rare Pride”, n.d., para. 2). Assignments and reports are completed continuously over the two year period to complete the Master’s program. The following are the BROP reports from the ten “land-based” cohort campaign managers in Indonesia. The reports are in an “outline” format to highlight the pertinent information of each campaign, listing all the BROP strategic steps taken to obtain the behavior change needed to accomplish the set objectives and goals. These reports were submitted in the middle of 2009, and the plans were then implemented from mid-2009 through 2010. Campaigns were completed by August 2010. From the analysis of the ten reports, 2 principle themes emerged: agroforestry and credit unions, campaign number ten dealt with local laws and regulations.

AGROFORESTRY CAMPAIGNS

According to Shaumil Hadi (2009), “agroforestry is a system of land use (farming) that combines trees with agricultural crops to improve profitability, both economically and environmentally. In this system, the diversity of plants in an area of land will reduce the risk of failure and protect the soil from erosion and reduce the need for fertilizers or nutrients from

outside the garden because of recycling crop residues” (p. 4). Agricultural biodiversity is primarily determined by the heterogeneity of the agricultural landscape, which happens to be a critical determinant of conservation in many rural landscapes (Dove, et al., 2005). Studies on indigenous and peasant agricultural practices have suggested that the local communities need to identify and create agricultural technologies fitting their ecological and social circumstances (Rhoades, 2001).

An agroforestry approach has numerous conservation advantages, as Hadi (2009) observes. He notes that agroforestry can “reduce the intensity of sunlight, for example coffee and cocoa trees that need shade. Because of varied plant species, harvest is expected to take place alternately throughout the year and this can avert a bad season. Land is always closed so that it is safe from erosion” (p. 4). Hadi also notes other advantages that include:

- a. Yield revenue of plants - given that “the garden will be more profitable for multistrata adopters because plant species diversity will yield better results if compared to only one type of plant in a garden or a monoculture system” (p. 6).
- b. Time management - “new land will take a lot longer in processing time than the agriculturally intensified land. Farmers will also minimize the travel distance to the garden by cultivating existing agricultural land rather than clearing new land” (p. 6).
- c. Income - “The calculation of monoculture coffee crops or cocoa crop income is a higher value when other plants are added, such as chili, corn, mahogany, and coffee crops” (p. 5).
- d. Disincentives – “Farmers will be spared (reducing disincentives) penalties relating to the regulation of land use in protected forests from the government and regulation of forest utilization restrictions such as the Logging Moratorium policies of the Governor of Aceh in 2007” (Hadi, 2009, p. 5).

The local villagers that participate in the environmental conservation campaigns throughout the different sites in Indonesia stand to reap huge benefits from the implementation of an agroforestry plantation system. Local adaptation will empower the villagers through long-term sustainability to gain not only economical profits but simultaneously protect their precious natural surroundings and the land they make their living on.

Campaign Analysis

Campaign #1- Agricultural Systems

Manager: Indra K. Harwanto

Lead Organization: TNUK office

Collaborating Partner(s): RARE, Agricultural and Animal Husbandry Department of Banten Province and WWF

Program Location: Ujung Kulon National Park (TNUK), Banten Province

Flagship Species: Java Rhino (rhinoceros sondaicus)

Threat(s) (primary): Expansion of new plantations inside TNUK

Obstacle(s)/Problem(s): The local farmers are expanding their farming territory in TNUK in order to increase the agricultural product output since they could not optimize production in their own lands (Harwanto, 2009).

Campaign Implementation Plans :

Stage 1 - Objective: To lessen the primary threat in TNUK and expand the knowledge of the local farmers by introducing a new agricultural intensification land system.

Stage 2 - Audience of intent: The communities of three primary villages bordering TNUK: Rancaninang, Cibadak, and Ujung Jaya

Stage 3 - Implementation approach (Harwanto, 2009): 1.

Socialization of agroforestry techniques in each of the three primary target villages.

2. The establishment and the strengthening of farmers' groups.
3. Monthly visits and field school activity.
4. Water source identification (1 time per village).
5. Strengthen the network with WWF and Agricultural and Animal Husbandry Department of Banten Province, (3 meetings).
6. Observation and survey related with the compatibility of land with the agricultural product, the market, and the implementation of the agricultural technology - one time in each of the three villages.

Expected Outcomes (Harwanto, 2009):

1. The Javan Rhino habitat area will remain still protected from the threat of farming new plantations inside the national parks by as much as 30 % from the previous year.
2. The knowledge of agricultural intensification techniques will be improved by 20 % in the local community.
3. 90% of cultivated farmers who live outside the TNUK in the three primary target villages will be willing to take roles in the implementation of the agricultural intensification system, a 78% increase compared to the previous year.
4. Farmers who live outside the area in the three primary target villages will agree that the farming intensification system can decrease the forest encroachment inside the protected area. This new understanding will increase by 70 % compared to the pre-campaign survey of the previous year which was 42.7 %.
5. 25 %, compared to the previous year which was 4.9 %, of the community who cultivated land inside the area will begin to talk to their friends about the more productive and sustainable agricultural techniques outside the park.

6. Coinciding with the end of the Pride campaign activity, 30 % compared to 0% from previous year, of cultivating farmers outside the area, will begin to implement the agricultural intensification techniques.

Campaign # 2 – Energy Gardens

Manager - Istiyarto Ismu

Lead Organization: Seka

Collaborating Partner(s): Rare, Seka Foundation, Department of Forestry and Plantations (DISHUTBUN) Buleleng Regency, Department of Agriculture and Livestock (DISTANAK) Buleleng District, Department of Agriculture and Animal Husbandry Buleleng Regency, Tani sekaha Buleleng (STB), Tani sekaha Jembrana (STJ), and West Bali National Park (BTNBB).

Program Location: West Bali National Park (BTNBB), Bali, Indonesia

Flagship Species: Bali Starling bird (*Leucopsar rothschildi*)

Threat(s) (primary): Lowland rainforest deforestation

Obstacle(s)/Problem(s) (Ismu, 2009): Survey results reveal that most firewood collection in forest areas of TNBB is done by farmers in surrounding villages of Sumberklampok (62.5%) and Melaya (57.1%). Preliminary data showed an estimated daily minimum of 30 m of forest wood lost in BTNBB. With an estimated potential loss of timber in TNBB of 10,950 m³ per year. Firewood is sold directly to the neighbor in need and sold outside the village through the collectors in Sumberklampok and from Jembrana that periodically come to the village to buy firewood that has been collected by the community.

Campaign Implementation Plan: July 2009 to June 2010

Stage 1 - Objective: Reduce the level of firewood taken from the forest TNBB while finding alternative means of providing wood and energy fuel. A strategy will be implemented to develop an alternative energy source instead of firewood.

Stage 2 - Audience of intent: 147 farmers and fuel seekers in 9 villages with a special focus on 40 persons residing in 2 villages: Sumberklampok and Melaya (Ismu 2009).

Stage 3 - Implementation approach (Ismu, 2009): Develop plots of 10 hectares in the form of integrated energy gardens of fuel wood plants and agricultural crops.

1. Preparation Phase – To determine the location of energy plantations, the division of roles and responsibilities of managing the energy gardens and agricultural technical training for managing and maintaining energy gardens and plant nursery fuel wood.
2. Implementation Phase: To establish plans for cultivation of fuel wood plants, watering and fertilizing plants, harvesting as well as land management and processing.
3. Monitoring and Evaluation Phase: To create a program for weekly and monthly meetings in which the focus groups in the nine villages meet to discuss the development of the energy program.
4. Sustainability Strategy: To cooperate with TNBB and Forest Service for development of energy plantations and to develop biogas as an alternative energy source instead of firewood.

Expected Outcomes (Ismu, 2009):

Community activity will gradually orient towards the energy garden. Collection of firewood and fodder will be carried out in the garden thus lessening the number of people in national park taking firewood. However, during the first and second year, taking firewood from the forest will still occur since the villages' firewood needs will not be completely met from energy plantations. When the firewood needs are met in the garden itself, then the community will benefit from integrated plantations. The conservation impact will be a long-term benefit. Another benefit is the livestock feed which will be available throughout the season and the yields from the seasonal harvest of the crops will also increase revenue.

Campaign # 3 – Plantation Systems

Manager: Eddy Santoso ***Lead Organization:*** Yayasan (Orangutan Foundation Indonesia)

Collaborating Partner(s): RARE, European Union (EU), Orangutan Foundation-UK, BKSDA Kalimantan Tengah, Lamandau Ecosystem Conservation Partnership (KPEL), and Bapak Tarwan

Program Location: Lamandau River Wild Life Reserve (SMSL) in Central Kalimantan

Flagship Species: Kalimantan Orangutan (P.q. wurmbil)

Threat(s) (primary): Destruction of forest land due to forest fires in SMSL area that adversely affects orangutan habitat in the Lamandau Reserve

Obstacle(s)/Problem(s): Land clearing for shifting agriculture and palm oil plantations with slash and burn system. Another problem is an information gap about where boundaries are between villages bordering SMSL.

Campaign Implementation Plan (Santoso, 2009): *July 2009 – June 2010*

Stage 1 - Objective: To stop the primary threats inside and outside the boundaries of SMSL thus conserving the habitat of the orangutans and other wild animals. To have as much as 50% (87-88 families) of the farmers duplicate the activity of the mixed plantation systems in 2010 and as many as 175 farmers by December 2011.

Stage 2 - Audience of intent: Farmers at Tempayung village, which has 45 families and at Babuai Baboti village, which has 130 families.

Stage 3 - Implementation approach: To introduce permanent farming with a mixed plantation system. The activities are held during a two year period with two implementation phases.

Activities for the first phase/implementation are: 1) Land identification - Identify the land – size of 2 hectares (ha). Determine the location of the site based on the local agreement between the

two village governments and the respective farmer groups. Evaluate the mineral composition of the soil. Collect data on types of plants planted by the villagers in the area (Santoso, 2009).

2) Management of land use - Prepare the land and its components, clear the land, prepare soil, make manure, develop a nursery, and create irrigation facilities. Each area serves as permanent farming with a mixed plantation system. 3) Plant and nursery maintenance. Second phase: 1. Plant renewal – development of plant nursery, cross seeds techniques and second generation plants. 2. Monitoring - maintenance, land monitoring, coordination and monthly activity evaluation. 3. Promotion - the mixed plantation areas via RarePlanet news, radio, village newspapers, and comparison studies. Other measures were used to strengthen the knowledge and skills of the two village farmer groups, such as: 1. Monthly meetings to discuss from 1-2 sustainability farming techniques. This activity focuses on the application of knowledge by giving examples and letting the participants practice what they learn in the meetings. 2. Learned skills directly applied to the farming area to strengthen the farming skills.

Expected Outcomes (Santoso, 2009):

At the end of the Pride Campaign, as many as 125 families of the intended villages (Tempayung and Babual Baboti) are expected to duplicate the mixed agricultural model of farming with mixed plantation system. Also, this approach will reduce the slash and burn method that will in turn decrease forest fires.

Campaign #4 - Agro forestry

Manager: Ismail

Lead Organization: Yayasan Lestari Sumatra Oragutan

Collaborating Partner(s): RARE, Technical Implementation Unit (UPT) of the Department of Forestry, Fauna & Flora International (FFI), Yayasan Lestari Sumatran Orangutan - Orangutan Information Centre (YOSL-OIC)

Program Location: Gunung Leuser National Park (TNGL)

Flagship Species: Sumatran Orangutan (*Pongo Abellii*).

Threat(s) (primary): Forest land encroachment which threatens the habitat and population of Sumatran orangutan

Obstacle(s)/Problem(s): The local farmers have adopted a monoculture agricultural pattern, thus, not optimizing the land area they cultivate. The selection of plants and trees cultivated is not the optimal choice either (Ismail, 2009).

Campaign Implementation Plan (Ismail, 2009): *July 2009 to July 2010*

Stage 1 - Objective: “To develop an agro-forestry model to optimize land use to reduce the need for land inside the TNGL, thereby reducing the activity of forest encroachment and sustain orangutan population and their habitats” (Ismail, 2009, p. 2).

Stage 2 - Audience of intent: 100 families in the village of Mekar Makmur

Stage 3 - Implementation approach (Ismail, 2009):

Stages of preparation

- a. The location of agro forestry demonstration plot - determined by discussions held by the villagers who became members of the Focus Group Discussion (FGD).
- b. Carrying out base-line survey - field study (base-line survey) conducted by specialists / experts assisted by members of the farmer groups to determine the type of soil, crop suitability, based on identifiable sources of water.
- c. Mapping land agro forestry demonstration plot and large scale deforestation was conducted using participatory mapping.
- d. Technical training of agro forestry systems - to improve farmers’ technical knowledge of agro forestry.

The training includes: 1) Theory and practice of agro forestry systems in Indonesia 2) Technical plant cultivation in agro forestry systems 3) Management and maintenance of plants in agro forestry systems 4) Training in creating organic fertilizer from animal manure and organic waste

in order to meet the farmers' own needs.

Stages of the implementation of agro forestry practices – construction of two demonstration plots, total area of 2 hectares. Polyculture systems and land management will be introduced with the purpose of reducing the need for land and providing additional economic benefits. Plant seeds will also be provided.

A plan for planting techniques will also be introduced. 3. Monitoring and Evaluation - Monitor the development of demonstration plots-1-2, conducted regularly every two weeks by group discussions of FGD (Focus Group Discussion). The FGD will discuss problems, solutions, creative ideas from members of the group of farmers in these two demplots. Farmer groups involved in the practice of agro forestry demonstration plots will be involved in monitoring and securing the area from encroachment and destruction of forest activities, monitoring activities of the refugees to refrain from expansion of land encroachment in TNGL. The presence of orangutans and other wildlife in the targeted area are also monitored. A survey is conducted to monitor the orangutan population. The farmer groups also held field observations of encroachment activities, so that observational data can complement and be used to analyze the actual conditions of the targeted area. 4. Publicity campaign to generate "Pride" community on Gunung Leuser National Park forest conservation, wildlife Sumatran orangutans and application of agro forestry systems and public attention will sharpen any adverse effects if the activity of forest encroachment continues to occur.

Expected Outcomes (Ismail, 2009):

The number of groups involved, the increase in knowledge and attitudes as well as the number of adoptions by the focused group of farmers is measured by KAP survey at the beginning and the end of the project. There is an emergence of self-reliance of the farming

communities. To bring new attitudes and behavior patterns to adopt agro forestry, providing the groups of farmers with a greater ability to improve in land management.

Campaign # 5 – Agroforestry

Manager – Shaummil Hadi ***Lead Organization:*** Fauna and Flora Int'l Aceh

Collaborating Partner(s): Rare, Fauna & Flora International FFI, Aceh, and HWC

Program Location: Geumpang Forest, Pidie District, and Aceh

Flagship Species: Sumatran Elephant

Threat(s) (primary): Destructive farming practices effecting Geumpang Forest, Aceh

Obstacle(s)/Problem(s) (Hadi, 2009): Some farmers refuse the implementation / adoption of agricultural intensification techniques quickly because they think that these methods prevent the clearing of new land that is available. No farmer wants to adopt this new system in their territory, and the farmers tend to choose the type of plants with a quick and economical harvest. There is difficulty in determining the boundaries of land that are planned for elephant conservation areas and community development.

Campaign Implementation Plan (Hadi, 2009): *August 2009 to July 2010*

Stage 1 - Objective: To permanently replace the old agricultural model to a new farming model with the intensification of farming systems and models of mixed agroforestry gardens and to reduce the access of farmers to open new land and the establishment or implementation of new agricultural technologies. Also, to implement the conservation of the elephant migration routes in the Forest Geumpang Sumatra, Ulu Masen Forest Complex, and Aceh-Indonesia.

Stage 2 - Audience of intent: Four farming villages located in Sub-District Mane, Pidie District

Stage 3 - Implementation approach (Hadi, 2009):

There are 4 garden demonstration plot planned to be built in 4 villages in the sub-district Mane,

coupled with a nursery unit / community. Land area of each garden demonstration plot area is 1 hectare per group. Implementing demonstration plots and gardens of the existing garden nursery will be done by each group of adopters in each village that has been formed. The main demonstration plot garden plan is chosen for its location close to residential communities and major roads that allow all audiences to monitor the results and the development of the nursery. This garden is used as a training center in addition to agricultural intensification is also environmentally friendly as a vehicle for direct field training for the local farming communities. The stages of preparation were the following:

A.1 Training programs - Training activities at the beginning to encourage the establishment of demonstration plot gardens and to provide outreach to farmers to create behavior change which will in turn lead to other farmers' adopting these behavior changes.

The training includes the following: a. Land preparation and planting techniques, b. Nurseries and plant propagation techniques, c. Cultivation techniques (Coffee, Cocoa, etc.), d. Harvest and post harvest techniques, e. The technique of making local organic fertilizer, f. Managerial techniques, g. Agro forestry techniques (and with conservation), h. Other techniques that are needed by farmers during the training period.

A.2 Establishment / Strengthening of Local Agroforestry Farmers' groups - 5 to 15 members.

A.3 Determination / Selection and Site Preparation Garden demonstration plots – each farmer group chose the location/place of the demonstration plots and nursery gardens agreed upon by each community group of local farmers.

A.4 Seed Procurement - the seeds will be provided. Some types of seed plants are among the following: Coffee, Cocoa, Durian, Sengon / Mahogany, and several other types of plant seeds needed by the local group of local farmers.

B. Implementation Phase / Early Implementation for Adoption

This phase consists of five steps. The first step is the processing of land, which involves the mapping, clearing, and preparing the area. The second step is the development of the area plots. Then, the third step is the development of the nursery, followed by the planting of seeds. The fifth and final step is comprised of continued training and field practice, and a comparative study of other regions that have carried out a similar plantation pattern.

C. Stages of Monitoring and Evaluation

This phase consists of two main steps. Monitoring looks at the development and progress of the garden area. An impact survey is conducted which aims to measure the success and progress of the implementation of agroforestry. The second part focuses on a sustainability strategy. It involves evaluating the management of the garden to make it more sustainable. This step also includes technical assistance from the local government. The final step looks at the overlapping of the garden areas and the elephant paths. It consists of conducting surveys to track elephant lanes conflicting with the garden areas.

Expected Outcomes (Hadi, 2010):

Local farmers are expected to know the local forest functions and supporting forest protection and adopt agro forestry systems / agro forestry permanently

Campaign #6 – Community-Based Forest Resource Management

Manager – Nani Saptariani

Lead Organization: RMI

Collaborating Partner(s): Rare, RMI

Program Location: West Java – Banten Province

Flagship Species: Javan Eagle (*Spizaetus bartelsi*)

Threat(s) (primary): Habitat encroachment

Obstacle(s)/Problem(s): The conversion of agricultural land to national park land under the purview of Halimun-Salak National Park (TNGHS) from an area of 40,000 ha to 113,375 ha, has created unclear legal status for the people living in the expansion area (Saptariani, 2009).

Campaign Implementation Plans (Saptariani, 2009): *September 2009 - June 2010*

Stage 1 - Objective: Encourage the recognition, appreciation and protection of community efforts in community-based conservation area management (KDTK and K2LPR) with the aim to restore habitat for the endemic bird the Javan Eagle (*Spizaetus bartelsi*) in 395.795 ha by the end of 2010.

Stage 2 - Audience of intent: The residents of Nyungdung and Parigi villages in the Halimun-Salak National Park area.

Stage 3 - Implementation approach: First, to encourage the recognition of community-based forest resource management through a Collaborative Management Scheme. Second, to open dialogue between communities and other related parties, and between members of the public on conservation issues, policies related to spatial conservation areas, and collaborative management programs.

A. Preparation Phase - Review of Secondary Data - Secondary data was performed to analyze the opportunities for legal recognition in conservation areas. Policy collaboration and zoning became the most important points to initiate the process. The other project was to develop a Model Conservation Village (MKK) by prioritizing three chosen strategies of restoration, rehabilitation and income generation. The tools used in MKK, among others, were to make observations, conduct reforestation and rehabilitation of damaged areas in the national park involving local communities, and in cooperation with local governments to improve the welfare of local communities.

B. Implementation Phase - Review and assess models of forest resource management in conservation in the national park area already completed to see the similarities and differences of concept implementation. In the context of improving the local economy, the national park office and a local mining company provided assistance in the form of sheep which is expected to help the local economy and reduce the community's dependence level to cut down wood.

The verification of the study results to be carried out to various parties, especially at the village and the national park area. The process of discussion and consultation with experts to be conducted to see how much the concept is acceptable in regards to the ecological, economic, and social development. A joint committee to be formed to share tasks for the implementation of design activities through dialogue and negotiation. Ground check activities planned to basically look at the boundary points. A Cooperation Agreement draft to be prepared and signed (Saptariani, 2009).

Expected Outcomes (Saptariani, 2009):

Positive changes will be seen in the Nyungcung and Parigi villages. The original area, formerly managed by Perhutani office, was in critical condition, but now is greener with a mix of a forest and garden crops. The area allocated as Leuweung (banned forest) will continue as a forest that does not allow any human intervention. In the context of the written MoU, KDTK and K2LPR will not use the name of Model Conservation Village, because KDTK and K2LPR is the result of a pure citizen initiative in accordance with the economic needs of citizens by maintaining proper ecological conditions. The culmination of activities successfully formulated a Conservation Area, forming a joint declaration. This declaration is a common ground to build collaboration in preparing the special zone management agreement TNGHS of the Spatial Plan Agreement (RTRK) in writing. All the problems that occur in the region should be resolved

through collaboration of the national park offices and the local community. The signing of the cooperation agreement is a starting point for the process of collaboration for all the members that are involved in the project . Collaboration and sharing in various activities is a manifestation of mutual trust between the community and BTNGHS.

Campaign #7 – Construction Program

Manager: Wahyudi

Lead Organization: Yayasan Ekosistem Lestari

Collaborating Partner(s): RARE, Yayasan Ekosistem Lestari (YEL), Bappeda Nagan Raya, Forestry and Plantation Department of Nagan Raya County, PU/Kimpraswil Department, Tata Ruang Department, Pan Eco and Australian Orangutan Project (AOP).

Program Location: Rawa Tripa Swamp area, Aceh

Flagship Species: Sumatran Orangutan (*Pongo abelii*)

Threat(s) (primary): Threats to the Rawa Tripa ecosystem which is a habitat of endemic endangered species, which includes the orangutan sumatera (*Pongo abelii*)

Obstacle(s)/Problem(s) (Wahyudi, 2009): The legalization of the county's RTRW which claims the Tripa peat swamp as a conservation area does not necessarily guarantee that this area will be well protected. Further actions were needed to make sure that the protection of the swamp will be conducted the way it should be and reduce the threats to the area.

Campaign Implementation Plan (Wahyudi, 2009): *July 2009 to June 2010*

Stage 1 - Objective: Construction of the County Main Plan Area (RTRWK) of Nagan Raya County supporting the protection and conservation of the Tripa peat swamp while providing a livelihood for the local community.

Stage 2 - Audience of intent: The community living in and around the Tripa peat swamp area

Stage 3 - Implementation approach: A participative approach was used involving various

stakeholders including the local community. The whole process involved seven stages. The first step was to collect data related with the Tripa peat swamp, such as the ecology, social-economy, etc. The second step was to create the participative main plan area (RTRWK). The following steps included hearings, drafting the main plan, public consultation, revising the draft, and campaign the draft to the public using any available media. The last step was to ratify the draft by the Legislative Assembly of Nagan Raya county (DPRK) Nagan Raya.

1. Data collection

The types of data include: Local/ community wisdom, especially the ones that related to the use and maintenance of the natural resources. Data was collected specifically through meetings with the community. Social-economic status of the community in the Tripa peat swamp. The cultural and social-economic relationship between the local community and the Tripa peat swamp. The ecologic value of the Tripa peat swamp which includes the richness of its natural resources, the benefits of the swamp to the area (hydrology, etc.), and how it affects the environment if the swamp was gone. Data related with the peat in Tripa and its economic potential. Map of the area, map of how the area being used by the community, HGU, etc.

2. Improvement of stakeholders' capacity

Along with data collection activity, improvement of stakeholders' capacity also is a main component of this plan. Stakeholders include the community, county government, university, and local NGOs. The goal is that the stakeholders are expected to have knowledge related with various aspects needed in the creation of the RTRWK which include:

The importance of the area (the richness of natural resources, ecologic functions, social and economic sustainability, and the impact if the area was gone). Knowledge about laws and regulations related with the area. Knowledge about mapping (moderate level for the community)

and GIS (advance- for stakeholders from governments). The steps of creating the participative RTRWK (at county level). Information related with various choices on how to maintain the Rawa Tripa.

3. Socialization of the RTRWK of the NAD Province.

Considering that the RTRWK involves both provincial and national development plans, the three levels of RTRWK (national, province, and county) have close relations. Thus the county's decisions must abide by the priorities at the provincial and national level. Therefore, socialization of province's RTRW needs to be held before the Nagan Raya County's stakeholders, so there will be no conflicts with the province's RTRW. The province's RTRW socialization held in seminars and presented and coordinated by the Aceh Green NAD Province team.

4. The drafting of the participative Nagan Raya County's RTRW

The plan is to present an evaluation of Nagan Raya county's RTRW draft to check for any discrepancies with the province's draft. Bappeda, an institution responsible for construction planning (buildings, bridges, etc.) at the province level, was given an RTRW draft. Community members were actively involved in the whole process of creating the county's RTRW draft, from its initiation up to its ratification. One of the community's participation duties is *informing*. Informing means that the government and the planners must inform each other anything related with the creation of the RTRW. The community actively got involved by giving suggestions, input, objections, etc. to the draft RTRW created (Scheme 1).

5. Socialization of the RTRWK of the county and public consultation.

The draft of the county's RTRW was submitted for consultation from various parties to get a response, input, and suggestions. Publication and notification was through the media,

hearing, village meetings, etc. This is especially important for the community living around the Tripa swamp as the villagers face the first hand consequences if the swamp is damaged or lost. A legal consultation to the draft also conducted.

6. Revise RTRWK draft:

Revise the draft based on the response, input, and suggestions gained during the socialization process.

7. The ratification of the Nagan Raya County's RTRW

The ratification of the county's RTRW to become county law was conducted by DPRD Kabupaten (county's representatives). The first step was a final draft presentation by a steering committee before the county's representatives to discuss the draft for county law. The final concept of the draft (the RTRW) was then ratified as a county law through a comprehensive final meeting of the DPRD Kabupaten.

Other measures taken: In order to avoid illegal use of the Tripa peat swamp area, supervision is really needed. This is the task and responsibility of the Forestry and Plantation Department of Nagan Raya County. In the last few years Nagan Raya County's Forestry and Plantation Department added the Forest Police/Ranger department which is responsible for supervising conservation areas within Nagan Raya County.

In addition to the county's effort, the development of community and local government awareness of the value of the conservation area and their willingness to protect it is needed and conducted through Kampanye Bangga (Pride Campaign) activities. Some of the programs offer various income alternatives using local potentials while keeping awareness for nature, especially those living around Tripa swamp. These kinds of programs ensure the sustainability of the Tripa swamp natural resources.

Expected Outcomes (Wahyudi, 2009):

The county's RTRW was legalized, claiming the Tripa peat swamp as a protected conservation area. This conservation status, in turn, provided new laws that will protect the Tripa peat swamp.

CREDIT UNION (CU)

A credit union falls under the category of a "microcredit" lending institution, more specifically, a sub- classification known as "cooperative" microcredit, such as cooperative credit, savings and loans associations, savings banks, etc ("What is Microcredit?", n.d., para. 30). Typically, a microcredit "union" makes loans on conditions suitable to the poor, usually farmers and villagers who have no access to credit. "The loans are small but sufficient to finance the micro-enterprises undertaken by the borrowers" ("Credit Delivery System", n.d., para. 10). These small loans are made to very poor people for self-employment projects that generate income, allowing them to care for themselves and their families. The loans could be used for necessities such as purchasing equipment and tools, raw materials for agriculture or farm animal purchases, etc.

Formation of a credit union "is based on the principle of sustainable natural resource management" (Adil, 2009, p 1). "CU is one of the methodologies of effective economic empowerment of the people to build confidence and mobilize grassroots efforts to support rural development programs and prevent deterioration of the quality and quantity of forest" (Adil, 2009, p 10). With the establishment of the CU group, its presence may also facilitate the public's access to capital. The CU places emphasis on the need of public's access to capital to successfully switch from illegal activities such as encroachment for agricultural or horticultural land (Adil, 2009). This in turn, forces the farmers to focus on more sustainable business

activities in order to acquire capital loans. Thus the community must “learn to perform activities that are more aligned to preserve the forest and develop their businesses” (Adil, 2009, p 3).

The CU is also an effective organizational tool by helping to develop and make joint strategic planning. Through the services of the CU, the farmers’ - who are accustomed to almost instantaneous loan funds – mindsets change (Adil, 2009). The community learns to create capital through the habit of saving, then using the savings as collateral to borrow on (Adil, 2009). This, in turn, creates openness and trust in the formed CU groups. “The CU builds self-reliance and economic empowerment in the community” (Adil, 2009, p 07).

Campaign #8 – Credit Union

Manager: Efizal Adil

Lead Organization: Pekat

Collaborating Partner(s): RARE, Organization of the Natural Resources Conservation (BBKSDA), Concentrated Foundation, Pekat Foundation, YEL / SOCP, and Conservation International Indonesia (CII).

Program Location: Nature Reserve in the area of Batang Toru Forest West Block (HBTBB)

Flagship Species: Sumatran Orangutan (Pongo Abellii).

Threat(s) (primary): The clearing of forests for farming and illegal encroachment

Obstacle(s)/Problem(s) (Adil, 2009): The taking of forest firewood for economic interests such as cash income for village communities is one issue. In the villages, an estimated 30% of the people work in the palm sugar making business (The wood needed for cooking sugar can reach up to 4-7 cubic meters per household per month).

The villagers’ economic system is limited. Poverty in the community is created from a lack of ability to organize business capital - a lack of venture capital. Generally, villages in the conservation area are abundant with natural resources. Poverty is not due to a lack of natural

resources that can be relied upon as a source of family income, or laziness of the community, but rather due to the weak and limited community's development capacity which is restricted by the policy and regulatory authorities (structural poverty). This creates a cycle of poverty ignored by the government. Forest encroachment is also due to the notion of land as an inheritance for their children and grandchildren and the lack of optimizing the productivity of the land already owned, therefore creating a need to clear and have a wider field area. The community's culture, handed down through the generations from the ancestors, endorses the habit of land clearing in the forest.

Campaign Implementation Plan (Adil, 2009): *July 2009 to June 2010*

Stage 1 - Objective: Reduce forest clearing for new land and simultaneously develop the economy of farmers around the area of the forest in the area of Batang Toru Forest West Block and assist with economic capital.

Stage 2 - Audience of intent: Four rural villages (287 households) of farmers; approximately 2,000 people.

Stage 3 - Implementation approach: Form 4 credit union groups, each representing a village, comprised of 8-12 people.

1. Strategic planning – plan the CU development for a three year period.
2. Concentrated Foundation firm on the principles of mentoring that encourages the growth of community self-reliance through the potential development opportunities and strengthening the capacity of human capital and social capital (social capital).
3. Instill expectations to avoid dependence on public assistance
4. Promote the development of social capital – foster mutual trust, mutual care, and prioritize what is really needed, together as one community to achieve a common goal.

5. Educate CU members.

Expected Outcomes (Adil, 2009):

Community activity will gradually move towards the activity of maintaining the garden or fields that have been available in the existing land and add new types of productive plants, such as rubber and palm trees. The CU used as an alternative economic, organizational, educational, socializing, and environmental conservation source. The illegal forest activities will decline 25% in the first year.

Campaign #9 - Credit Union

Manager: Ade Yuliani

Lead Organization: Titan

Collaborating Partner(s): Fauna Flora International, Yayasan Titan, CU Maure Pesisir, CU Pancur Solidaritas, and Rare

Program Location: Sungai Putri (SP) forest swamp peat complex

Flagship Species: Kalimantan Orangutan (P.q. wurmbil)

Threat(s) (primary): Forest encroachment and tree cutting in Sungai Putri forest swamp

Obstacle(s)/Problem(s): The lack of capital, family money management, skills and innovations to improve the community economic level are the main factors of forest encroachment and cutting of trees (Yuliani, 2009).

Campaign Implementation Plan (Yuliani, 2009): *July 2009 to June 2010*

Stage 1 - Objective: To facilitate the establishment of a credit union (CU) in the Sungai Putri area. Develop a CU with a minimum of fifty members with plans to increase to two hundred members. To obtain benefits from the CU in terms of capital access and use it in continuous productive businesses that the members could create and develop. To empower the community's economic potential by organizing and managing community capital.

Stage 2 - Audience of intent: A community of farmers, fishermen, and carpenters, consisting of four villages: Tempurukan, Sei Putri, Tanjung Baik Budi and Kuala Tolak.

Stage 3 - Implementation approach (Yuliani, 2009): *July 2009 to August 2010*

Several steps are implemented in the creation and management of a CU. The first is to organize the introduction and the planning of a CU in Sungai. Then conduct a comparison study for the staff candidates and representatives of each village. This is followed by the creation of campaign marketing teams to market CU products door to door in the villages. In order for prospective members to have a full awareness of the CU vision and mission, basic training about CUs is given to the members to have a comprehensive understanding of money management, along with critical training in social, economic, and natural resources through the educational tools of the CU. The training also includes motivational, bookkeeping, audit training among others. The training is enhanced by the internship of community representatives to the closest successfully operating CU. Then there is the pre strategic planning and strategic planning for the CU. This is followed by monitoring and evaluation of the whole system every 6 months. Along with the specifics involving the CU, there is also the introduction of permanent cultivation with mixed plantation system.

Expected Outcomes (Yuliani, 2009):

The prospective members were trained in basic information about CUs; this encouraged them to improve their economic level independently and collectively. The CU members will be able to use CU services for various needs, anywhere from household needs to opening a business. This in turn, allowed community member to have access to viable business opportunities that they would otherwise not have. Some of the borrowed money was used to purchase vehicles to help the members run their business. The establishment of a CU will

provide long term benefits for the community through sustainable activities. Incidentally, the new funded capital provided an alternative to exploiting the forest, thus, improving the preservation of some orangutan habitat in the Sungai Putri forest.

Campaign #10 – Laws & Regulations

Manager: Bobby Nopandry ***Lead Organization:*** Natural Resources Conservation Body

Collaborating Partner(s): RARE, Leopard Brigade Rapid Reaction Forest Police Unit (SPORC BMT), PETAI Foundation, KSM Salipotpot Indah, and Balai Besar KSDA Sumatera Utara

Program Location: Dolok Surungan Wildlife Reserve (DSWR)

Flagship Species: Sumatran Tiger

Threat(s) (primary): Forest encroachment perpetrated by the private sector for commercial gain

Obstacle(s)/Problem(s): The protection of the DSWR forest is limited. There are no laws and regulations concerning the wide use of land in the game reserve area (Nopandry, 2009)

Campaign Implementation Plan (Nopandry, 2009): *July 2009 to April 2010*

Stage 1 - Objective: Develop and gain community support to drive out culprit businessmen.

Stage 2 - Audience of intent: The village communities of Meranti Timur and Lobu Rappa

Stage 3 - Implementation approach: *(according to the MOU amendment):*

The Handling Phase Formulate proposals and voice legal concerns to the Forestry Minister. Put up posters (pictures of handcuffs), at some encroached forest area locations, to discourage perpetrators and coordinate efforts with the Tobasa Police station, regarding the cases of forest encroachment.

The process: The process involves a series of steps. First is the presentation of appeals and warnings I to the encroachers. SPORC BMT patrolling of the forest area. At the same time, a community nursery is constructed and supported by the school's program. This is followed by

the planting and maintenance of plants/crops in a 5 hectares area. This serves as a starting point of the sustainable reforestation program. Then, there is the approval and establishment of Meranti Timur Village as the Conservation Village Model. One community center nursery established with 4 schools as satellite nurseries. Then initiate self-community planting (reforestation) in critical areas of DSWR and its surrounding areas. Maintain an active involvement of schools in the foster plants program (reforestation plants).

Expected Outcome (Nopandry, 2009):

Through the joint efforts of community leaders and the village government, Meranti Timur villagers decided to offer their village as the Village Conservation Model. Meranti Timur villagers agreed to undertake reforestation with plant seeds facilitated by Region III Conservation Section. Conservation cadre and schools built a nursery on their own. The involved schools performed a foster plant program independently.

LOCAL ADAPTATION

The maintenance of conservation areas in Indonesia is very susceptible to conflicts of interest; on one side there are government regulations and on the other there is the economic interest of the community. The latter is of major importance to the people living in the surrounding areas of the park and also from the investors who take advantage of the local community to exploit natural resources without taking into consideration sustainability issues. Social, cultural, and economic problems as well as limited knowledge, skills, and capital have triggered the clearing of forests for agriculture and other illegal activities. There exists an information gap: the unclear legal status of public access to farmland and the economic needs impacted by the tendency of society to expand their agricultural land. The local farmers also adopted a monoculture agricultural pattern, thus, not optimizing the land area they cultivate. The

selection of plants and trees cultivated was not the optimal choice either. In regards to the economic situation, the lack of capital, family money management, skills, and innovations to improve the community economic level are the trigger factors of forest encroachment and unmanaged cutting of trees.

The managers' reports document the BROP strategic steps implemented in order for the local community to get engaged, motivated, and involved. The BROP implementation strategic steps show how the local people, through a consensus of village representatives, adopt focus groups to undertake a number of responsibilities in the local community. These responsibilities deal with a myriad of duties, such as planning, implementation, monitoring, and strengthening relations with local agencies and local government groups among others.

In the agroforestry campaigns, the established focus groups set a division of roles to plant, maintain, and manage the newly formed farming gardens, which happen to be provided by the local farmers themselves. They learn to check the compatibility of their land for local agriculture products. They learn how to plant using only seeds from local nurseries. They also learn to plant crops for sustainability of the local variety, such as trees to provide wood fuel, plants for their own livestock feed, and crops for food. The farmers, as well as the members of the local community, must train and educate themselves on all issues relevant to their cause. The education and training received focuses on local issues, from the technologies applied to local farming, to how to capitalize on the local social and economic situations and natural resource management as well.

In the establishment of credit union campaigns, the local communities empowered their own economic potential by organizing and managing community capital. The village members formed credit union groups, each representing a village. They organized a grassroots plan to

establish a CU. These local groups planned, organized, and established their very own CU through the collective funds saved by the local community. They prioritized what was really needed, together as one community to achieve a common goal. The local villagers received basic training about CUs to give prospective members a comprehensive understanding of money management. This process encouraged the growth of the local community's self-reliance through the potential opportunities and the strengthening of human and social capital

Monitoring Success

The success of the campaigns is measured by a quality management team utilizing sophisticated threat reduction metrics at every stage of the campaign and gathering meaningful evaluations of campaign goals and objectives (“Programs”, n.d., para. 5). An internal 5-point scale ranking system is used for tracking and monitoring the milestones and deliverables of the campaign using what Rare labels as the SCORE card. It is composed of three elements, known as the 3 Cs: capacity, constituency, and conservation (Katie McElhinny, personal communication, June 25, 2009). During the project planning phase, the objectives of the campaign are defined. Success of the campaign is then measured, using quantitative and qualitative data, by checking if the stated objectives were achieved (Sarilani Wirawan, personal communication, n.d.).

Weekly “flash reports” are made using the SCORE card and “deliverables” to monitor the progress of the campaigns (Sarilani Wirawan, personal communication, n.d.). These weekly reports use the “traffic light” colors of red, yellow, and green (Katie McElhinny, personal communication, June 25, 2009). The color red represents a complete halt of the campaign until the problem and/or obstacle is resolved before continuing. The color yellow means to slow down the process and use precaution. The color green, of course, represents everything is on

track and is a “go” (Katie McElhinny, personal communication, June 25, 2009). To further enhance the sustainability of the campaign, the leadership team overseeing the campaign makes a monthly call to Rare’s home office in Washington to report the progress of the campaigns (Katie McElhinny, personal communication, June 25, 2009).

Rare uses a “memorandum of understanding” - M.O.U. - as an agreement between Rare and the lead organization (Katie McElhinny, personal communication, June 25, 2009). Rare goes a step further to assist its partners by providing them with tools for success. Partners who complete the 2-year Pride campaign program become part of Rare’s Global Alumni Network and are eligible for Alumni Project Grants to support follow-up work at their site (“Training”, n.d., para. 9). These funds can also be used to expand on the work already started (Sarilani Wirawan, personal communication, n.d.). Rare also offers regional workshops to its partners to provide “continuing education”, and after the 2-year campaign, the alumni partners can become mentors themselves to guide the new partners in their programs (“Training”, n.d., para. 3). More than 75 Pride alumni also continue to support a global movement for local conservation, with 88% still working toward this cause (Summary of Achievements, 2008).

Rare sees conservation as a long term endeavor rather than just a project for the moment. But as with most lifelong undertakings, several key elements must be present in order to take hold and last for years. In the world of conservation, these include the ability to raise funds, build strong local partnerships, and have a clear plan of action to reach their goals (“Training”, n.d, para. 9). Rare will not start a new campaign without first looking at sustainability, and it periodically monitors the campaign throughout the planning process to insure its long-term success. Rare also evaluates and shares what is learned from each project to continuously improve the practice of conservation (“Mission”, n.d., para. 1).

CHAPTER 5

CONCLUSIONS

This study set out to examine how Rare uses BROP as the “behavioral change” strategy needed in environmental campaigns to help engage, motivate, and involve the community at the local level. The analysis was on the environmental advocacy campaigns’ “plans” to achieve the set objectives to reach the desired goals. Cox’s (2010) environmental advocacy campaign model is designed to answer three fundamental questions: what, who, and how. These three primary questions prompt three stages for the campaigns. These three questions directly correlate to a campaign’s (1) objectives, (2) audience, and (3) strategies (Cox, 2010). The campaign managers’ BROP reports answered each one of these three primary questions. First, the reports formulated the specific campaign objectives, then identified the audience of intent in the campaigns, and finally implemented the necessary strategic steps needed to bring about the desired results.

The aim of this study was to explore how environmental campaign objectives can be implemented by utilizing BROP as the third stage strategy of Cox’s environmental advocacy campaign communication model. Cox (2010) defines environmental communication “as the pragmatic and constitutive vehicle for our understanding of the environment as well as our relationships to the natural world” (p. 59). According to Roling (1990), “communication can be used as an instrument for inducing change, especially in the ways in which societies interact with their environments” (as cited in Castillos, 2000, p. 48). Communication played an important role in the implementation of the BROP steps in the environmental campaigns. It was crucial for the campaign managers to convey their ideas, concepts, plans, and pertinent information to the local

participants. Cox's environmental advocacy campaign communication model was applied to study any new developed awareness, attitudes, or behaviors toward conservation at the local level. The myriad of BROP strategic steps taken in the Indonesian campaigns supports the concept that global conservation cannot succeed without changing the way people relate to nature at the local level. The community must be engaged to ensure success. The implementation efforts of the environmental conservation campaigns were a community based approach. Thus, the initiatives taken helped the audience of intent "move beyond standard education models and find ways to inspire and motivate people on an emotional level" ("A Rare History", n.d., para. 5).

Rethinking environmental conservation

Humans must approach the challenge to conservation "as a problem not of the environment alone but also of society" (Dove, et al., 2005, p. 2). People should be intricately involved with nature, not separate from it. "It is more productive to view people as an integral and perhaps even beneficial part of an ecosystem functioning than as alien elements responsible only for its destruction" (Dove, et al., 2005, p. 6). Rist's perspective is that "participation has become valued as an instrument to 'sustain development' by encouraging people to assume responsibility for maintaining changes/services introduced by intervention projects" (as cited in Rhoades, 2001, p. 317). Taken as a whole, the environmental advocacy campaigns suggest that "the solution to biodiversity conservation does not lie in the traditional model of separating people from nature" but rather making the local community part of the solutions (Dove, et al., 2005, p. 20). The local villagers involved in the Indonesian campaigns, by actively participating in and managing their own environmental conservation programs, were able to better appreciate their natural surroundings and productively and successfully engage in the conservation of their

own forests.

Whether it's getting people to adopt more sustainable agriculture, operate a credit union, or to better manage a protected area, the conservation field is becoming more and more focused on mastering the art of social and behavioral change. In light of this new perspective, "if conservation is indeed associated with a pattern of social relations, then it is maintenance of these relations that will ensure that conservation succeeds" (Dove, et al., 2005, p. 7). Guneratne (2008) writes, "to participate in a discourse that crosses cultural boundaries, one must be able to speak the language in which that discourse is carried out and have a value system that makes that discourse meaningful" (p. 111). Disregarding these social relations will probably create a major hindrance in any conservation effort. In order to benefit from this point of view, "farmers and conservationists can work together to design agricultural landscapes that complement the goals of both conservation and agricultural productivity" (Dove, et al., 2005, p. 14).

Local Adaptation Responses

There is clear recognition that environmental problems are closely linked to social, economic, and political issues and can be solved using a local and integrative approach. The local adaptation of conservation strategies is paramount to the successful implementation of the campaigns. One of the significant findings that emerged from studying the implementations of the environmental conservation campaigns was that integrating the economic and livelihood needs of local communities while striving to achieve the goals of biodiversity provided effective results. Conservationists Puri and Lye believe in "a greater awareness of the potentially beneficial nature of small-scale human manipulations of the environment. Large-scale, state-imposed conservation plans so often fail to promote conservation" (as cited in Dove, et al., 2005, p. 22). As Scott, Hirsch, and Warren report, "this occurs not only because small-scale human

manipulations of the landscape may be critical to conserving resources but also because large-scale, technocratic and centralized state schemes that attempt to control people and resources often proceed without adequate understanding of the local social relations surrounding resource use” (as cited in Dove, et al., 2005, p. 23). Conservation efforts in Indonesia can only succeed if there are alternative methods to utilizing the limited resources of the forest. A recurring pattern appears to form a convergence of agricultural and conservation agencies, along with farmers, all working together to create alternative paths for agricultural development based on diversified traditional land rather than intensive monoculture methods (Dove, et al., 2005) “When the subsistence use of forest resource is combined with a highly diverse cultivation strategy outside the forest, we are able to see positive consequences for both society and environment at the landscape level” (Dove, et al., 2005, p. 26).

The Future

As Scherrer concludes, “there will probably remain a certain fundamental incompatibility between caring for nature and focusing on human needs, especially if looking at a global scale” (2009, p. 568). “It is only by addressing the socio-economic problems of developing nations, such as Indonesia, that the international community could hope to forge the basis for a global consensus to successfully confront threats against the environment” (Ezeonu, 2004, p. 40). The future of Indonesia lies ultimately not so much in implementing Western models and ideas with no regard to the local culture but, rather, in developing and implementing homegrown, local specific, responses to environmental issues. “Through such attention to both local and extra-local realities, it may be possible to enhance and foster conditions that support a rich and varied landscape, a diversity of floral and faunal species, and equitable socioeconomic conditions” (as cited in Dove, et al., 2005). In summary, to better understand, appreciate, and ultimately utilize

the strengths of local constituents to effectively succeed in conservation efforts, it is vital to have better knowledge of the local practices, all juxtaposed with worldviews. In light of this analysis and evaluation, it is evident that support and integration of the local culture, economy, and social structure is of utmost importance to the global environmental arena in changing the approach of conservation, not only in developing countries such as Indonesia, but in all environmental conservation endeavors worldwide.

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CURRICULUM VITA

Alvaro Arvizo was born in El Paso, Texas as a first generation American, second of six children born to Mexican immigrants. He started his university career at Texas A & M University, in the college of engineering, but then transferred to the University of Texas at El Paso, where he received his Bachelor's of Business Administration degree. After graduation, he initiated his professional career in marketing with A-Line Trading, a clothing distribution firm based in California. He later returned to El Paso and became an ESL instructor at El Paso Community College. He then decided, after teaching for several years, to pursue a Master's degree in Communication. In the spring of 2009, he entered the Graduate School at the University of Texas at El Paso, with the aim to graduate in the fall of 2010.

Permanent Address:

517 Martha Way

El Paso, Texas 79907