COMPONENTS OF SHORT-TERM SUCCESS IN PROJECTS TARGETING ILLEGAL LOGGING

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Illegal logging, perpetuated by corruption, is a serious problem in developing countries, specifically Brazil, Indonesia, and Uganda. Development projects focused on fighting illegal logging have not adequately been analyzed to assess the approaches taken in fighting corruption in addition to an academic literature review. Through a literature review and analysis of development problems, this research focused on the roles of the project donor, implementer, cost, duration, participants, levels of participation, mechanisms, and success. Next, a summary of observations for success from the projects were compiled to provide a thorough understanding of projects fighting illegal logging in the three focus countries. The results of the literature review produced causes and effects of illegal logging in states, as well as recommended methods for combatting and preventing illegal logging with a focus on the corruption that can drive illegal logging. The analysis of reviewed projects observed that none of the components identified appeared to be strongly necessary or unnecessary for a project to be successful or unsuccessful across countries, but some useful observations within countries were identified. The summary of reasons for the successfulness and unsuccessfulness of projects produced five themes: ineffective relocation, successful economic mechanisms, coordination, satellite technology, and appropriate community management. Building on this, a theoretical framework was created that prepared hypotheses focusing on state capacity, classification of corruption, and implementing partner, as well as focusing on coordination and close relationships with stakeholders while utilizing satellite imagery to function as a check to ensure integrity between all actors.

PREFACE

The topic of illegal logging has become an important part of my life over the past year of intensive study. I am grateful to all of the organizations who had project evaluations available to the public and ask more organizations in the private, public, and nonprofit fields to continue this trend of knowledge-sharing and information dissemination. I thank my friends, family, and colleagues for all of the support over the past year, without which I surely would not have been able to undertake the research and writing of my thesis. I especially thank my thesis committee for their dedication and guidance.

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INTRODUCTION

Nationally protected forests clear-cut to the ground, acres upon acres of barren land, soil erosion, massive flooding, desertification. These are all familiar phenomena that all can be linked back to a common cause: deforestation. And when this deforestation is the result of illegal logging, the environment becomes more susceptible to abuse and resource exploitation. In countries where illegal logging is a major driver of deforestation, the ecological results can be devastating to the environment, as mentioned above, and even more devastating to future generations when a pattern of dependency on these forests at unsustainable rates is realized.

Illegal logging propelling deforestation is not a new phenomenon, but what has changed in recent years is the recognition that taking precautions to address the potential for corruption can be effective in fighting illegal logging. In 2001, the United Nations (UN) Food and Agriculture Organization (FAO) first recognized corruption in the forestry sector as a major cause of high rates of deforestation, specifically where illegal logging was involved (Koyunen and Yilmaz 2009). By recognizing that corruption was a problem linked with illegal logging, FAO not only brought to the world stage corruption as a cause of illegal logging, but also became an advocate for focusing on this corruption.

This realization has resulted in a number of different approaches to fighting illegal logging and corruption concurrently by building in mechanisms for transparency and accountability into projects with goals focusing on reducing illegal logging. However, thus far there has not been any in-depth analysis to support any one approach or specific combination of approaches to see where illegal logging has actually diminished by the end of a project. Without knowing what the best approaches are to fighting illegal logging and the corruption exacerbating it, it can be safely said that aid projects are not being as effective as they could with the limited resources by which they are constrained.

A number of academic articles and books have been published describing the problems and case studies related to illegal logging, but this academic perspective only describes a piece of what is happening. An all-encompassing approach would provide a new kind of framework which takes into account academic

analyses and development project evaluations and fuses the two together to create a more complete picture of corruption and its interlacing relationship with illegal logging. This study examines first literature and then actual projects attempting to control illegal logging to build a theoretical framework that will serve as a base in future research initiatives to combat illegal logging.

LITERATURE REVIEW

When deforestation (or the removal of trees) is the result of timber that is obtained in ways that are not in line with the local, regional, or national law, the product is considered illegal logging. This definition extends beyond harvesting to include transporting, buying, or selling of timber that was illegally extracted (Zaitunah 2004). Illegal logging can take many forms including logging in areas that are protected by law, logging species that are protected by law, illegally obtaining timber concessions, and extracting more timber than legally permitted. Commonly, this is the result of governments' poor enforcement of laws and regulations, either in a complicit manner (deliberately involving corruption) or in a negligent manner (often the result of a lack of resources to monitor and enforce laws) (Contreras-Hermosilla 2000). Since numerous illegal logging activities are heavily linked with corruption, it is important to include this element as a major focus of study.

Corruption for the purposes of this research is identified by the World Bank definition of "the abuse of public office for private gain" (Bannon 1999). In general, it is recognized that corruption can be either grand—involving politicians, high-ranking government officials or military officers—or petty—involving local governing officials, low-ranking government employees, or junior military officers (Hanley and Rhodes 2004). These different forms of corruption have diverse consequences for illegal logging practices and have varying degrees of impact on forests in local communities and nationally. The literature clearly recognizes this problem and identifies the one-sidedness in the allocation and division of resources by those in power, not only in monetary value, but also in the resources available for the next generation (Winbourne 2002).

Corruption is a serious threat which is strengthening illegal logging through encouraging overexploitation and reducing the efficacy of conservation programs. This in turn has harmful effects on forests, wildlife, fisheries, and other resources (Laurance 2004). Not only does corruption endanger the environment and facilitate greed, in the forms of bribery and embezzlement, it steals from funds that were allocated for environmental programs. These long-term impacts can starkly add up over generations of corrupt activities.

Methods to address this corruption are numerous with mixed results. Different historical, political, and social circumstances require an array of ideas to be tailored to the setting where corruption is causing or amplifying illegal logging. A number of academic papers have been written to provide recommendations on these problems, but none have performed a comprehensive approach with multiple project evaluations to see what project aspects have worked best, and under what circumstances. They have indeed, though, produced important insights into the causes, effects, and proposed solutions addressing illegal logging and addressing corruption.

Causes of Corruption in Illegal Logging

There are as many reasons for the cause of corruption as there are people who will participate in corrupt activities. The age-old questions asked are whether people are acting in a corrupt manner as a result of bad institutions or bad individual behavior. However, what this research is more interested in is the driving factors that are attempted and recommendations to address corruption through projects. The most common causes cite underpaid government officials, weak institutions, and a culture tolerant of corruption.

When government officials are not paid enough (a supposition that is often cited by academics), they need to resort to other means to be able to make ends meet (Laurance 2004). They will therefore turn to accepting bribes in return for turning a blind eye to an illegal activity or to actually becoming involved in the illegal activity. It is especially easy to accept bribes for illegal logging because there may be valuable trees that are easily accessible on protected public lands—ineffectively monitored by the government.

This timber can be sold for a high price and is far from the city, therefore unlikely to be missed by others, especially people with the influence and power to protect the forests; thus making it especially susceptible to capture through illegal logging (Koyunen and Yilmaz 2009) (Smith and Walpole 2005).

Institutions—or rather the lack thereof—can also play an instrumental role in facilitating corruption. Lacking in transparency, accountability, and checks and balances, weak institutions allow for the weak enforcement of laws leading to improbability of harsh punishment (Koyunen and Yilmaz 2009) (Winbourne 2002) (Laurance 2004). Their poor design—with few standardized processes and few but powerful officials in charge of a large spectrum of responsibilities—is susceptible to subjective individual interpretation which results in little objective information, further decreasing accountability and increasing opportunities for corruption (Winbourne 2002) (Koyunen and Yilmaz 2009).

Culture is also cited frequently as a major source of corruption. The guiding principles behind this idea are some societies' traditions of nepotism, class privilege, and patron-client state relationships. These relationships drive the formation of institutions and reflect the acceptance of the local people as the conventional way in which operations are expected to be run (Laurance 2004) (Robbins 2000) (Mulder 2011). This also translates into a lack of respect for rule of law. Because laws are expected to be broken and officials corrupt, the logic runs: why should those with less follow the law while those with more do not (Winbourne 2002). Under this theoretical premise, the cultures that place a low value on protecting public lands with trees will be even more susceptible to corruption causing illegal logging resulting in high rates of deforestation.

Effects of Corruption on Illegal Logging

The effects of corruption on forests are clear to see and easy to measure—where there were once trees on protected public land, there are now barren expanses. And the estimates of illegal logging and its timber production are staggering. In 2002, rates for illegal logging were estimated as high as 90 percent in Brazil and 80 percent in Indonesia (Hanley and Rhodes 2004). And in Uganda, where only 18% of the ground is covered by forested area, illegal logging rates are maintained at high levels ("Uganda" 2011).

Corruption allows illegal logging to flourish and tropical forests to be destroyed. Beyond this, the indirect environmental degradation results in a loss of natural habitat for the flora and fauna that made their homes where protected trees once stood. This loss is particularly significant in Brazil, Indonesia, and Uganda because of the biodiversity hotspots that are located in illegally logged areas (Laurance 2004).

Illegal logging caused by corruption also has direct effects on the human populations near forests which are illegally logged. These communities are losing valuable timber and firewood without proper compensation or a means for retribution. Indigenous people are intimately affected with the loss of use of traditionally managed forests and few means of alternative livelihoods. Future generations will also be affected as illegal logging is not generally concerned with sustainable harvests, resulting in a great loss of the natural resource to future generations without compensation (Laurance 2004).

What makes this system worse is the fact that the relationship between corruption and illegal logging is more than codependent—it is a vicious cycle with each act making the cycle worse. Once corruption and illegal logging both become a way of life, a natural give and take creates a deepening hole that will demand more. Amacher et al. (2011) describes on page 102 the relationship between corruption and illegal logging as such:

> Corruption and illegal logging are unarguably intertwined, with each made worse by the presence of the other. We find that enforcement of the government intent on punishing forest crimes cannot be considered independent of bribery incentives, and more importantly, that royalty design cannot be considered independently of other instruments.

Recommended Strategies to Address Corruption Fueling Illegal Logging

In recognizing the causes and effects of illegal logging, literature has gone a step further to recommend methods for reform. It is this stitch holding the illegal logging processes together that is so important to unravel in order to begin to make effective changes for the present and future generations. In general,

the academic literature puts forth two strategies to fight corruption in illegal logging: a top-down approach and a grassroots approach.

The top-down approach includes international aid reforms and institutional reforms to change incentives within the country, ultimately rooting out corruption. The logic proceeds that the problem of corruption spurring illegal logging is the result of a well-organized group of illegal loggers that are bending and breaking laws with inadequate consequences. Recommended aid reforms include increasing foreign aid in anti-corruption projects in committed countries, decreasing or halting aid in countries that are not making valiant efforts to change their ways, and enforcing international agreements through stern punishment of offending multinational corporations (Laurance 2004).

These institutional reforms typically consist of legal reforms (e.g. legislation passed to update or improve laws) or process reforms (e.g. simplifying and streamlining administrative processes) (Winbourne 2002). These reforms aim to change the corruption within the administration which is behaving corruptly. This type of reform may be particularly effective when grand, centralized corruption is the root of the problem and high-level reform is called upon to address it.

The second approach focuses on the strengthening the grassroots level to increase awareness and encourage monitoring by the local community. Recommended actions include establishing village community committees or citizen watchdog groups to raise awareness about any illegal logging or corruption which leads to it. In addition, these groups can monitor forests and processes for obtaining logging permits to catch current illegal logging and prevent it in the future (Robbins 2000) (Winbourne 2002). These reforms can change the incentives for ordinary or small-scale participants in illegal logging by increasing the likelihood that they will get caught and punished without a corrupt safety net to bail them out.

BACKGROUND

Some of the worst cases of illegal logging, worsened by corruption, have come from Brazil, Indonesia, and Uganda. Each country has a significant problem with illegal logging and is seeing strain on protected local and national forests. Each also struggles with different levels of corruption that can seep into and worsen illegal logging operations. While each shares these common problems, the history, politics and culture surrounding them promote each country its own path to develop specific, targeted approaches. Projects that take place in these countries to fight illegal logging use wide-ranging methods with varied success, but understanding the methods used in each and why those methods were successful or unsuccessful will shed light on what types of projects may work and in what circumstances.

Brazil

Though illegal logging has been a historical problem in Brazil, there has recently been hope that Brazil is becoming successful decreasing their illegal logging. Although, due to the nature of illegal logging it is difficult to obtain an accurate estimate of the percentage of timber production, multiple illegal logging monitors have all seen decreases in illegal log production (Lawson and MacFaul 2010). As described below, rates have been decreasing steadily since 2004 leading many to look to Brazil as a potential model for success.

The path of Brazil's timber-tracking system has been revered as a model for other countries to follow. Brazil has been transforming from a country with an illegal logging problem to a country that is actively fighting an illegal logging problem. Early on though, the first attempt to control illegal logging had little success, as its main enforcement technique was to increase fines associated with these illegal activities. These fines proved to be unsuccessful because the high-level corruption involved in illegal logging in Brazil would still have a large payoff even if the fines were enforced (Barreto et al. 2006).

The rule of law in Brazil has been strengthening since the government began in 2005 to crack down on illegal logging as a result of Brazil's new tough Public Minister. After 89 arrests in 2004, half of which were

government employees and some were upper-level employees for the prominent Brazilian NGO IMAZON, illegal logging activities were estimated to have decreased by 31 percent the following year (Hanley and Rhodes 2004). This example demonstrates how top level commitment can be effective and taken seriously.

Most recently, Brazil has created a system that incorporates modern technology to track timber. Incorporating tools for public monitoring available on the internet, Brazil has created a system for alerting authorities if illegal logging is happening. Brazil has set up a system to cross-check reports from the public with its own internal knowledge of illegal logging activities. By setting up these public and internal systems, the government has created a platform for civil societies and citizens to incorporate and share knowledge. This opening up of communication allows for people who may live remotely and marginalized groups to report information on illegal logging practically in real time ("Meeting the Challenge" 2009).

However, it should be noted that nothing happens in a vacuum and there may be other forces driving the decrease in illegal logging in Brazil. The demand for timber may have decreased as aluminum and other similar materials are becoming common substitutes for wood products. Also, the global recession in 2008 has likely affected the timber trade, which may have likely caused the payoff for illegal timber to be lower thus decreasing the economic incentive to participate in illegal logging—especially given the increase in fines (Lawson and MacFaul 2010).

Indonesia

In Indonesia, the problem is growing with an increase in deforestation of 107% between the periods of 2000-2005 and 2005-2010 (Butler 2010). It has been estimated that illegal logging makes up as much as 80 percent of its forest removal (Hanley and Rhodes 2004). Though illegal logging has been identified as a problem in Indonesia since the 1990s and despite the numerous efforts of the international and local communities, there has been little progress in curbing illegal logging.

The corruption in Indonesia's illegal logging has changed significantly when comparing illegal logging under and after President Suharto's rule. During Suharto's rule, illegal logging was monitored by the centralized government to ensure that the proper kickbacks to the higher-up government officials were taking place. This strong model served to benefit those in charge and also created an organized and recognized system of corruption, considered to be fairly stable. After Suharto's rule ended, the top-down organized corruption associated with illegal logging also ended. In its place has grown the decentralized petty corruption that plagues Indonesia today. Suharto's legacy of corruption is still strong and the complex networks that support it are still thriving, the only difference is now there is more uncertainty and less institutionalization of the corrupt illegal logging practices (Hanley and Rhodes 2004).

According to McCarthy (2002) this complex network in Indonesia today is still presenting significant challenges to anyone seeking to address the corruption spurring illegal logging. Due to the complicit agreement of local village leaders, illegal logging has benefited and strengthened many powerful groups in the short-term. These groups have formed relationships built on mutual trust and benefits that have, through decentralization, been given the opportunity to grow. Luca Tacconi (2007) further explains on page 82 the intricate relationships:

> Officials exploiting their positions could generate significant rents, both for their own personal use and for political purposes. Key local politicians could increase their popular support by expanding district budgets to provide for projects and programs that offered opportunities to clients and followers. At the same time, entrepreneurs and their agents could maintain timber operations by entering into exchanges that involved extralegal gifts and favors with certain local politicians and State functionaries.

This challenging dynamic creates problems for projects using traditional theories pushing developing countries to move towards decentralization. Recommended by foreign entities that did not fully understand the local operations of illegal logging in Indonesia, government implementation of decentralization has in fact worsened the circumstances that allow for illegal logging. Civil society is

therefore being given the limelight to address corruption, as well as change the culture around illegal logging in Indonesia (Arnold 2008).

Uganda

Corruption in illegal logging in Uganda is far more different from the corruption in Indonesia and Brazil. It received significantly less attention from the international community, even though the entire forested land area in Uganda is now just 18 percent with almost no primary forest still intact. This is an even greater calamity when considering that some of the highest concentration of biodiversity in Africa—over 5,000 plant species, 345 mammals, and 1,000 birds—are losing their natural habitats ("Uganda" 2011).

Widespread corruption leading to low enforcement of a ban on exports of raw timber from Uganda has fueled the illegal logging activities. Illegal logging is so rampant, everyone from forestry officers to the police to government officials are all alleged to be involved in the scheme. With such widespread involvement in corruption, it is difficult for any government agency to create the needed reforms ("Uganda" 2011).

The Ugandan National Forest Authority (NFA) has unsuccessfully attempted to crackdown on illegal logging, but received criticism from high-ranking authorities including President Museveni. It is unpopular for the agency to take measures to fight corruption leading to illegal logging, leaving NFA frustrated and ineffective. NFA has recently focused on turning its efforts to awareness among the public and also timber dealers to identify and prevent illegal logging ("Uganda" 2011).

While some see Uganda's institutional model as a success, with NFA managing forestry and its sister agency Forest Inspection Division (FID) which regulates NFA, significantly more donor aid has been given to NFA to have stronger managing capabilities. This leaves FID with relatively fewer financial resources to regulate the increased work that NFA is able to conduct. In addition, there is relatively low monitoring by independent civil societies of either of these agencies which can lead to corruption internally or externally by officials in either agency ("A Guide" 2005).

Within NFA it has been alleged that acquiring land rights involves so much red tape that the only way to attain legal logging rights is through favoritism and bribery. Companies that are able to acquire rights to legally log, and are required to do so while meeting sustainable standards, are unable to meet the local demand for timber. Thus, a local black market has been established with a number of illegal loggers and traders (Natural Enterprise 2005).

Table 1: Summary of Key Country Features

Indicators	Brazil	Indonesia	Uganda
Extent of Deforestation	57.2% of total land is forested with 6.9% of total forested land considered protected areas	60% of total land is forested with 20.9% of total forested land considered protected areas	18% of total land is forested with 13% of total forested land considered protected areas
Annual Rate of Deforestation	From 2000-2005, deforestation rate of 0.6%	From 1990-2000, deforestation rate of 11%	From 2005-2010, deforestation rate of 2.72%
Estimated Rate of Illegal Logging	Up to 90 percent of deforestation is illegal logging	Up to 80 percent of deforestation is illegal logging	Nearly all deforestation is from illegal logging
Trend of Illegal Logging Rate	Decreasing	Increasing	Not well measured
Prevalence of Corruption	Moderate petty corruption	High petty and grand corruption	Very high petty and grand corruption
Actors Heavily Involved in Illegal Logging	Local loggers fail to acquire and follow appropriate licenses, bribing government officials when confronted	Indonesian military is accused of playing a large role, with some military members even operating their own illegal sawmills	District forestry officers, rangers, the police and local government officials have all been accused of involvement
Scale of Illegal Logging	Medium-scale illegal logging is trending down and small scale logging is trending up because it is difficult to detect by satellite	Large-scale with firms involved in illegal logging colluding with authorities and customs for export	Small-scale with local communities using forests that have become national protected parks
State Capacity for Monitoring and Enforcement	Satellite timber tracking system builds government capacity to see where illegal logging is occurring in days Combined with the transparency that allows the public access to the satellite imagery, opportunities for corruption in IBAMA have plummeted Overall, medium to high state capacity to control illegal logging	Lack of enforcement largely from kickbacks from illegal logging companies to not enforce laws Ministry of Forestry relies heavily on foot patrol for monitoring and enforcement Overall, low state capacity to control illegal logging	NFA and FID have been considered to be underpaid and have low job security as a driving reason for their corruption NFA relies heavily on foot patrol for monitoring and enforcement Overall, very low state capacity to control illegal logging
Sources (Chemonics 2001), ("Uganda" 2011), (Mupada 2009), ("Illegal" 2008), ("Rainforests" 2006), ("Forests, Grasslands, and Drylands—Brazil" 2003), ("Forests, Grasslands, and Drylands—Indonesia" 2003), (Palmer 2000), ("Indonesia" 2010), (Chan 2010), (Barreto et al. 2006), ("Logging" 2005), (McNeish et al. 2010), (Hanley and Rhodes 2004)			

METHODOLOGY

The methodology for this research includes an extremely detailed search for project evaluations through search engines, academic journals, international NGO websites, bilateral project evaluations, multilateral project evaluations, and other sources heavily involved in illegal logging issues. Some useful sources such as Rainforest Action Network (RAN) micro projects may have provided interesting counterpoints to some of the larger, perhaps less confrontational organizations that were selected. Unfortunately, either RAN did not evaluate their projects or does not make these evaluations available to the public, thus they were not included.

Originally, it was anticipated that ten projects should be found in each country to get a good sense of all types of illegal logging projects. However, as the search for projects commenced and progressed, it was clear that each project was very unique and none of the stories or observations in projects involving illegal logging should be left out. Thus, more projects were reviewed, totaling in 52 case studies.

Project sources and focuses were varied and intended to include the broadest range of sources and experiences. While it is difficult to compare data from these different sources that may have differing opinions, motivations, and observations, this gives the broadest and most comprehensive explanation of what is happening on the ground in these countries. In addition to coming from varied sources, this research identified a number of variables that are part of projects including the donor, implementer, duration, cost, participants, levels of participation, mechanisms used to complete the projects, success of the project, and impact in illegal logging.

Donors have been coded as bilateral donors, multilateral donors, private donors, and NGOs to give anonymity to the donors. The object of this research is not to name and shame any particular organization or agency, but rather to provide a general overview of comparable observations without becoming entangled in the specifics of which particular government or organization was succeeding or failing. The donor has been recognized as an important variable because different donors (e.g. bilateral, multilateral, NGOs) have different institutional incentives in aid delivery which may affect the

effectiveness of the project design and support received by implementers over the course of the project (Martens et al. 2001).

The implementer is important to consider for similar reasons (e.g. institutional incentives) and, beyond that, there may be principal-agent relationships between donors and implementers depending on the institutional structures in place. Furthermore, foreign or far-removed implementers that are not familiar with the local culture, regulations, and practices may be less effective than local implementers (Martens et al. 2001). For instance, a multilateral donor aiding a local government implementer may be less likely to face a principal-agent problem than an international NGO implementer; however, when the temptation of corruption is involved, the international NGO may be the better choice.

Duration and cost can play important roles in project success and failure. Though there has been little research investigating these project components, these project components have been noted in research to play substantial roles in the appropriateness of the timeframes and budgets. In project evaluations, it is common to find evidence that project timeframes or budgets were too constricted. Research has demonstrated that project duration and budget planning abilities have been components impacting project success or failures (Ahsan and Gunawan 2009).

Participants and types of participation—who is participating and how they are participating—has been identified as crucial to project success, especially in projects seeking to address illegal logging. High participation of all stakeholders can add value to project design and successful implementation, and participation of local community members and forest users plays a large role in ensuring compliance with the project goals especially if they are being asked to be involved in a monitoring project component (Moran and Ostrom 2005).

The project mechanisms—or activities as many of the projects refer to them—are the actual undertakings that are carried out during the project and can be categorized. It is crucial that project activities are in line with the intended goal and clearly lay out the logic of their impact. The proper execution of these mechanisms are intended to meet the project goals (in these cases, reducing illegal logging) so it is crucial

that the appropriate mechanisms are in place and are achieving their objectives. It is important that the mechanisms consider the institutions and culture that is propelling the corruption and illegal logging, and, in theory, addressing both may result in a successful project.

The success of the project and its measured impact on illegal logging are included as indicators of the overall success of the project. The success of the project focuses on those components that are related to illegal logging objectives and whether or not they were successful on whole. Combined with the measured impact on illegal logging in the area, varying subjective and objective indicators analysis can join to form a cumulative depiction of successful and unsuccessful projects.

The extraction of this information is intended to give a quick and accurate sense of the project description and provide a baseline to compare across projects. While most of the data is objective (e.g. duration, cost) other indicators are more subjective (e.g. participants, levels of participation). Before setting off to conduct a full study based on expected findings, a small subset of six projects was taken and coded according to the original plan. Quickly the merit of this activity was realized.

The original design began by identifying the donor, implementer, duration, cost, participants, levels of participation, mechanisms used to complete the projects, success of each mechanism, success of the project as a whole, and impact in illegal logging. It was not difficult to identify the donor and implementer, but duration and cost were actually more difficult to measure than expected. Participants and levels of participation, though seemingly clearly laid out, needed to be refocused. Success of each mechanism and overall success that projects reported appeared to be irrelevant for activities not related to illegal logging that were included in some projects; only the overall project success of activities involving illegal logging was included in final analysis.

Project duration was not difficult initially. It essentially was divided by how many months the project took to complete from beginning to end. This started to get more convoluted as projects involving great detail from large organizations, such as the World Bank, can require on project evaluations. The definition then became how many months the project lasted from the effective date to the closing date. Not all projects

include the project design process in their timeframe so it is more comparable to use the date that most aligns with after the formal agreements were signed and dates when the implementer actually began carrying out the project.

Some budgets were very detailed, separated into what was exactly expended on illegal logging activities and what was spent on other aspects of the project that may not have been as directly related to illegal logging or its associated anti-corruption. After a great deal of consideration, the total budgets for project aiming to reduce illegal logging as a whole were included to not presume that the other aspects were completely mutually exclusive. For example, if part of a project aims to protect gorillas and educate people about gorillas and their habitat, this activity may in fact be helping to reduce illegal logging in the gorilla habitat. Another example is if a project takes place across three countries and promotes knowledge-sharing on anti-corruption in forestry between the countries. This research may only be interested in one of those countries, but there may be spillover benefits that the other two countries are creating. Thus, cost will only be included in this research as an indicator to show the scale and magnitude of projects.

Participants were initially easily identified and classified, until levels of participation were included. It was predetermined that Pretty's typology of participation would be used (Cornwall 2008), but applying it to the case studies proved more challenging than anticipated. This is by far the most subjective element in the analysis of the case studies that still has a structured method. Not only is it subjective for the coder, it is subjective for whomever wrote the evaluation or case study. The way in which a situation is worded will create a certain perception for a reader that may or may not be accurate to the project. Furthermore, an issue arose in determining how participation should be coded where there were multiple evaluations of a single case study.

To maintain accuracy, Pretty's typology of participation was followed and consulted often to ensure consistency. In the cases of multiple sources regarding a single case study (which is always preferable to one source), it was determined that it was best to identify the different roles portrayed in the different

evaluations to obtain the most complete description of participation perceived by the evaluator. In addition, if multiple local NGOs were involved in a project at different levels, it would be represented as such. While this system is not as perfect as traveling to each of these project sites and interviewing stakeholders, it does maintain consistency throughout, making the levels of participation represented in evaluations and literature more comparable to one another.

The mechanisms for success are basic narrow categories that include awareness activities that raise awareness through education or information sharing, monitoring (specifically forests or biodiversity) for enforcement or for a baseline and post-project comparison, and legal which refers to new regulations begin formed, legislation passed, or executive orders issued. It was starkly underestimated how relevant an economic mechanism was and many projects were determined to give people economic alternatives to illegal logging, and immediately it was adopted as a mechanism. Intentionally excluded were capacity-building activities. These are inherently a part of each project; even in the gesture of awarding a large amount of money to an organization, its capacity will grow to meet that financial management need. Additionally it is very difficult to demonstrate or prove that a project actually built capacity because it is much less tangible than the other mechanisms.

Only the cases that appear to have the clearest successes or failures were chosen to include in this study. The selection for success and unsuccessful was based on a combination of the case study's own description of its success and of the actual demonstrated reduction in illegal logging rates. Cases were selected to emphasize variation in project successes within countries that suffer from illegal logging. The success cases included safeguards against corruption in illegal logging while the unsuccessful cases all included indications of corruption with limited or absent means of addressing and reducing it.

The most successful projects are most effective when they can actually demonstrate impact. One case study was included under the unsuccessful category that was classified by the evaluator as a success, but was quite evidently unsuccessful at meeting the project objectives and decreasing illegal logging. This was mentioned only as a side-note to demonstrate the need for caution in simply taking a cursory glance

at a project evaluation and believing it was successful without an in-depth understanding of the situation. Unsuccessful cases were easily identified and described after exhaustive review of project evaluations. In one such case for example, forest loss rates were actually increasing in protected parks, indicating potentially higher levels of illegal logging.

Even in the projects selected as "successes" based on their project evaluations or other reliable documentation cannot ensure certainty that the written words accurately depict the true impact of these projects. Of extreme suspicion are project evaluations written by aid recipients to donors. This stems from inherent conflicts of interest that may encourage recipients to describe the project as more successful than it actually was in order to attract future funding. In these cases, it almost seems that the recipients are catering to what the donor wanted to be happening in the project rather than what the organization actually succeeded in accomplishing. It is important to keep in mind these incentives and maintain a critical eye when analyzing evaluations that are not from independent sources.

SUCCESSFUL AND UNSUCCESSFUL CASES

As described in the methodology, these projects were selected because they demonstrated the clearest achievement of success or failure in their project, especially when including the measured decrease of illegal logging or surrounding corruption (a considerably difficult task). The cases are divided by country, having a short description of the case study and separating successful and unsuccessful cases. The comparison of the successful and unsuccessful cases demonstrate the challenges within countries and aspects that work to address illegal logging and the corruption that generally accompanies it. The successful and unsuccessful cases will be reviewed followed by a summary and analysis of how the cases are similar, how they differ, and what can be learned from each.

Table 2: Brazil Successful and Unsuccessful Case Overviews

Project Title	Strengthening Voices for Better Choices	Mamairaua Sustainable Development Reserve Project	Reducing Emissions from Deforestation and Forest Degradation (REDD): Brazil	Matto Grosso Natural Resources Project	Rondonia Natural Resources Management Project
Donor	Bilateral donor	Bilateral donor National government Local government International NGOs	Bilateral donor	Multilateral donor	Multilateral donor
Implementer	International NGO	Academic institutions National government National NGO	National government	Local government	Local government
Duration (months)	48	120	36	118	117
Cost (USD)	$5,728,448	$8,935,452	$1,500,000	$24,190,000	$21,430,000
Participant (level of participation)	Local NGO (material incentives, functional) International NGO (functional, consultation) Private organizations (functional) Local government (functional)	Academic (interactive) Local government (interactive) National NGO (interactive) Donor (functional) Local community (consultation)	Local governments (consultation) Private organizations (consultation) NGOs (consultation, manipulative) National government (interactive) Indigenous peoples (manipulative)	Local government (interactive) National government (passive) Local community (manipulative) Local NGOs (consultation) Indigenous community (consultation)	Local government (interactive) National government (passive) Local NGOs (manipulative)
Mechanisms	Economic	Legal Awareness Monitoring	Legal Monitoring	Legal Monitoring Economic	Legal Monitoring Economic
Project Success	Successful	Successful	Successful	Unsuccessful	Unsuccessful
Effect on Illegal Logging	Not measured	Practically all logging is now done legally, and verified by the local community	Since 2004 rates of deforestation have been decreasing in the Legal Amazon	Some reduction in deforestation, but little progress made due to conflict with IBAMA	Successful enforcing of conservation areas, but no effort to calculate reduction in illegal logging
Sources: (Pires 2010), (Hesselink et al. 2009), (Koziell and Inoue 2006), (McNeish et al. 2010), ("Rodonia" 2003), ("Mato" 2003)					

Brazil Successful Case Summaries

The synopses of the successful projects in Brazil are presented in Table 2. These projects were all funded, at least in part, by bilateral donors and used diverse implementers. The timeframe of these successful cases ranged from 36 to 120 months, and project costs ranged from $1.5 million to $8.9 million. All cases involved a number of stakeholders, all at varying levels of participation. Although two of the three projects involved the national government as implementers and used legal reform, all three projects had very different means of achieving their goals. Two of these success cases involved a bottom-up approach, while the REDD project was clearly top-down.

It is interesting to observe that only the Reducing Emissions from Deforestation and Forest Degradation (REDD): Brazil project had a monitoring component built-in to the project, and this component used information already available to the public. It is a wonder that the other projects did not take advantage of this mechanism and use it to their advantage. Instead, the Strengthening Voices for Better Choices (SVBC) project and the Mamairaua Sustainable Development Reserve (MSDR) project were only informed through no measurement at all or local observations (which were not further explained), respectively (Pires 2010).

The commonalities among these success cases come down to excellent coordination and communication. As presented in Table 1, there are many actors involved in each of these projects, with many opportunities for communication breakdowns, cooperation frustrations, and responsibility confusions. But instead of collapses, clearly defined roles and expectations were part of each of these successful projects. The accountability that each project had with respect to roles and expectations of all stakeholders is a likely reason that corruption did not undermine these successful projects.

The SVBC project's greatest success in illegal logging was linking the problem as inherently a governance problem rather than a law enforcement problem. Through coordination with national and international NGOs, the SVBC project developed a three-pronged approach to address illegal logging: championing best

practices, instilling responsible markets, and cultivating beneficial forest governance practices (Pires 2010).

Through the creation of the Modular Implementation and Verification System for Forest Certification (SIM), the SVBC project worked to promote forest certification for logging companies (Pires 2010). Six forest companies joined in this initiative, becoming certified within four years of membership through the support of the SIM program (Hesselink et al. 2009). By coordinating with local NGOs and local governments, steps have been taken towards a public purchasing program; culminating with the signing of the responsible public procurement degree (Pires 2010) (Hesselink et al. 2009).

Through coordination with private sector, civil society and government institutions, the SVBC project identified areas of governance to improve. Proposed public reforms were then shared with the government and led to the restructuring of the Acre Forest Council as well as other State Councils. These reforms then helped to remove red tape that was causing inefficiencies and creating the opportunity for bribery. This project has successfully demonstrated how organizing industry to improve good governance can be effective and prove to be potentially less risky in reducing corruption than trying to reform the government as a sole producer (Hesselink et al. 2009).

The MSDR project was successful in turning a forest where local communities could not legally log into one in which local communities were able to obtain property rights for logging legally. Sustainably produced timber has a higher market value and it cannot be confiscated or held for a bribe by the Brazilian Institute of Environment and Renewable Natural Resources IBAMA—a Brazilian agency with a strong reputation for corrupt dealings. Thus, there are significant economic incentives for the local communities to participate in local sustainable logging when given the option to do so legally.

Because the local community was highly involved in this project, they had the incentive to engage in monitoring and enforcement to prevent illegal logging activities. Because of this incentive and the high value placed on monitoring, illegal logging has virtually disappeared (as have the intervening government officials who had accepted bribes in exchange for turning a blind eye towards illegal logging). Allowing

this local ownership has not only saved the government valuable resources, but has also reduced the temptation of corrupt individuals who would otherwise participate in illegal logging activities (Koziell and Inoue 2006).

The successful REDD project is likely to have spurred policy debates and steps towards reducing deforestation. By allowing Brazil to independently take ownership of its own regulatory monitoring systems, this project left the sense of leadership and responsibility in the hands of Brazilians. This has led to an impressive Brazilian system of monitoring and enforcing forest policies, considered by some to be a model that other nations should look to when developing their own monitoring and enforcing systems (McNeish et al. 2010).

On a local level, the REDD project made payments to both families and communities for abstaining from the benefits of illegal logging, especially in the protected national parks. While financial support appealed to Brazilians, the donor enjoyed lots of international attention for the successes of the Amazon Fund. The REDD project has quietly shown a commitment to Brazilian forestry, leading others to do the same. This high level leadership has had a positive impact and fits in well with high level forest governance reforms in Brazil that were already occurring (McNeish et al. 2010).

Brazil Unsuccessful Case Summaries

The clearest examples of project unsuccessful are both by chance funded by a multilateral donor and implemented by local governments. They were implemented around the same time, for 117 to 118 months and included some, but not all relevant stakeholders. The costs were similar as well, totaling about $24.1 million and 21.4 million each. The mechanisms used were similar, and in both cases it appears that the Brazilian agency IBAMA was not participating or actively working against the projects.

It is important to note that some multilateral donors use extensive detail in their project evaluations and take great care in attempting to depict the situation as accurately as possible. Because of this care, it is fairly obvious when they have a successful or unsuccessful project. Other projects evaluations that were

reviewed were opaque or attempting to portray a positive situation when it was unclear if the project was truly successful or unsuccessful. These project evaluations are only excluded to reduce the ambiguity surrounding what is a clear-cut successful or unsuccessful project.

Because these two projects were implemented and finished very near one another, the multilateral donor choose to save resources and duplicate some information from one project report to the next. Though these were two clearly separate projects, for the sake of convenience some sections of the evaluations are similar, if not identical. Therefore, this snapshot will begin with the similarities and finish with the noted differences between the projects that may have led to their failure.

During the implementation of the two projects, the local government was under tight management from IMF-imposed conditions for spending. At the local level the government was therefore under close watch, reducing opportunities for high level embezzlement. This kept a hard line on any potential "leakages" that could result from corruption in the national government. However, there were still cases where funds were reallocated to other Brazilian projects that were more visible instead of to the agreed upon projects ("Rodonia" 2003).

In both projects, local civil societies and private organizations did not agree with the project objectives and had limited involvement in the project design and implementation. The multilateral donor and local government had severely misjudged the local communities that were assumed to be, at a minimum, not opposed to the development objectives that the multilateral donor and local government had agreed upon to help the local communities ("Rodonia" 2003).

The limited enthusiasm of the local government and poor working relationship between local people and government agencies caused confusion at best and conflict at worst. This could be because there was not a role for IBAMA built into the project designs. Whatever the reason, it is safe to say that IBAMA was uninvolved or even opposed to these two projects ("Mato" 2003). It is likely that the multilateral donor recognized the increased risk for corruption if IBAMA was involved and chose not to involve the agency to reduce that risk. However, the multilateral donor did not take into account the propensity for IBAMA to

retaliate by attempting to undermine these projects. Better planning may have included a place for IBAMA to be involved with proper accountability and transparency mechanisms and clearly defined roles and responsibilities.

Project implementation did vary at the state level. The Mato Grosso Natural Resources (Mato Grosso) project did have success in creating a robust environmental agency, expanding forest conservations areas, and implementing a rural licensing system that leverages local enforcement authorities. There was pushback by political interests however in the expansion of these conservation areas and progress halted. Anticipated zoning law changes under the Mato Grosso may be delayed and muddled. In the Rondonia Natural Resources Management (Rondonia) project, the local government made efforts to push through the agreed upon zoning law and successfully had a new zoning law in place in 2000. In general, the local government was not very strong but did manage to carve out state conservation units and improve environmental conservation legal structures at the state level ("Mato" 2003).

Table 3: Indonesia Successful and Unsuccessful Case Overviews

Project Title	Ecotourism Product Development as a Means to Supplant Illegal Logging in the Tangkahan Area of Leuser National Park	Indonesia Forest and Media Project (INFORM)	Kerinci Seblat ICDP	Implementing the Conservation Concession Approach on Sumatra's Siberut Island
Donor	International NGO	Multilateral donor	Multilateral donor	International NGO
Implementer	Local NGO	International NGOs	International NGO National government	National NGO
Duration (months)	8	24	80	12
Cost (USD)	$22,325	$1,232,055	$46,869,000	$92,840
Participant (level of participation)	International NGO (passive, functional) National government (passive, functional) Foreign government (passive) Local NGO (interactive) Local community (interactive) Local government (functional) Media (functional)	International NGOs (material incentives, consultation) Local NGOs (consultation, functional, passive) National government (consultation, functional) International donors (consultation) Private organizations (functional, passive) Media (functional) Local government (passive)	Local NGOs (functional) Local government (functional, passive) Local community (functional) National government (passive)	Local NGOs (self-mobilization, functional) International NGOs (self-mobilization, functional) National government (self-mobilization) Local community (functional, self-mobilization) Academic institutions (functional)
Mechanisms	Economic Monitoring Legal	Awareness	Legal Monitoring Awareness	Legal Awareness
Project Success	Successful	Successful	Unsuccessful	Unsuccessful
Effect on Illegal Logging	Monitoring and enforcing an estimated 10,000 hectares of the National Park to stop illegal logging activities	Not measured	During the project, the greatest rate of forest loss occurred in parks which received the largest proportion funds from the project.	Not measured
Sources: ("Final" 2004), (Whitten et al. 2005), (Kerinci 2003), ("Final" 2005)				

Indonesia Successful Case Summaries

Indonesian successful cases, described in Table 3, depict varied donors including an international NGO and a multilateral donor. The commonalities of these success cases occur in the implementation, where all of these projects rely on local or international NGOs to carry out the projects. These success cases are all shorter and less costly when compared to the success cases with Brazil, ranging from eight to 24 months and costing between $.02 million and $1.2 million. Once again, there is a wide range of participation at various levels involved in the project. Methods do vary, and what is most interesting is that the least expensive project yet reviewed was able to use mapping data analysis to demonstrate an impact on illegal logging. This would suggest that cost should not necessarily be an issue when it comes to using satellite technology to monitor projects.

In the Ecotourism Product Development as a Means to Supplant Illegal Logging in the Tangkahan Area of Leuser National Park (Ecotourism), the project demonstrates entrepreneurship at a local level to address the problem of illegal logging in a way that will also deter corruption. Stakeholders at all levels came together, through the facilitation of the local community and local NGOs to create an economic alternative to illegal logging. By creating a well-managed ecotourism market, the Ecotourism project has provided alternative livelihoods for at least 32 former illegal loggers.

Not only that, but changing village regulations to permit the local community to give penalties empowered the local community to pay attention to monitoring the forest, which they had become more invested in as a result of the ecotourism benefits. To include the National Park in the project, a revenue sharing system was created that both parties felt were fair by signing a Memo of Understanding. The clearly defined roles, accountability expectations, and monitoring by the local community created a project addressing an illegal logging problem and deterring corruption. All-in-all, this project is a perfect example of how decentralization can work and not fall prey to corrupt persuasions (“Final” 2004).

In the Indonesia Forest and Media Project (INFORM), international NGOs came together with many other actors to make illegal logging a prominent issue in the presidential election campaigns. The international

NGOs were able to boost media coverage to raise the awareness of the illegal logging problems in Indonesia. This along with public debate increased awareness, culminating in illegal logging being a focal issue of the first and second rounds of presidential debate. By raising this issue during the presidential election, the local population will become more informed about the state of their forests and potentially demand that their future leader have a plan to address this serious problem (Whitten et al. 2005).

Indonesian Unsuccessful Case Summaries

Unsuccessful projects in Indonesia were funded by a multilateral donor and an international NGO. One was implemented by two parties, an international NGO and the national government, while the other was only implemented by a national NGO. The projects had a wide range in terms of the cost of the project from $46.9 million to $.09 million and duration from 80 months to 12 months.

In the Kerinci Seblat ICDP project, it is quite apparent that the government was simply not committed to this project. Due to events outside of the project (a shift in the political and economic contexts), attempts to control illegal logging became too unmanageable to try to control. Not only were project activities cut short due to feasibility issues, it soon became apparent that neither the BPK—Indonesia's Supreme Audit Institution—nor the national government truly cared to change their tactics and improve themselves, not even to appease the international community (Kerinci 2003).

Independent audits uncovered poor standards in record-keeping and unfettered illegal logging within parks. When shown evidence of illegal logging in all nine active concessions, BPK's lack of action demonstrated the failures of the government agency and brought into question the integrity of the agency. BPK claimed that it would look into the matter later, but meaningful action from BPK, as with the Forestry Department of Indonesia (PHKA) or the Ministry of Forestry, was unrealistic to expect. Though not described in the project evaluation, the presence of illegal logging in addition to inactivity by government agencies combined with the deviously corrupt accounting practices indicates a high level of suspicion that corruption played a role in the government inoperativeness in the project. The regions

where the project was most concentrated had the highest deforestation rate in KSNP, demonstrating in another way that the project was truly an unsuccessful case (Kerinci 2003).

In the Implementing the Conservation Concession Approach on Sumatra's Siberut Island (Siberut Island) project, a very interesting case emerges where a textbook form of corruption ruins progress. As the Ministry of Forestry was working with the Siberut Island project to develop a plan to prevent illegal logging in a high-risk area, the Ministry of Forestry backed out of talks and turned the high-risk area into land that could be legally logged by a large-scale logging company. Despite the good communication and an excellent prior working relationship the national NGO had with the Ministry of Forestry, the Ministry curiously disregarded the project it had been actively working on with the national NGO without a clear explanation ("Final" 2005).

However, the national NGO that was implementing this project did not give up easily: it recognized that there was a split opinion between the Ministry of Forestry, the Directorate General of PHKA, and the Directorate General of Production Forests. PHKA was concerned about the offshoots of illegal logging that would result from legalizing logging in the protected area, as this would indirectly cause local people to try to sell timber to this logger and create an illegal logging problem. Production Forests and the Ministry of Forestry opposed retracting the logging concessions and tried to persuade the national NGO to monitor potential problems with the logging instead of confronting them directly ("Final" 2005).

The national NGO leveraged this dissonance between agencies and formed working groups made up of experts to determine what would make the most sense for the environment, for public policy implications, and for the potential socio-economic impacts. One result from these meetings was the demand for an investigation into corruption in the local government and in the Head of the Forestry Office. The apparent corruption involved bribing some high-level officials made a great deal of sense. Not only did the logging company target public officials, but they also offered give large sums of money to local government and community members in exchange for support in allowing logging ("Final" 2005).

Though the originally intended to set up a Conservation Management Agreement (CMA) to combat illegal logging, by the end of the project the national NGO had to learn to combat the new incentives in the forms of bribes offered to the local communities. Many members were not in agreement with CMA because they knew they would receive more cash illegally selling timber to the large company. Additionally, the logging company had been in contact with the local community and government, offering cash payments to individuals in exchange for allowing the company the logging concession. These payments however were not intended for public benefit, but would enrich certain individuals of power and not benefit those that value the forest most. This failed project demonstrates the power of corruption that can infiltrate governments and local communities, deeply constraining outside organizations that are committed to integrity and countering illegal logging activities ("Final" 2005).

Table 4: Uganda Successful and Unsuccessful Case Overviews

Project Title	Echuya Project	Empowering and Strengthening Civil Society for Participatory Forest Management in East Africa	Carbon Sequestration Forest Project
Donor	Bilateral donor	Bilateral donor	Private organization
Implementer	National NGO National government	National NGO	National government
Duration (months)	60	48	36
Cost (USD)	$554,085	Unknown	Unknown
Participant (level of participation)	Local government (interactive) National government (self-mobilization) Local NGOs (interactive) Indigenous community (interactive) National NGOs (interactive) Local community (interactive)	National government (passive) International NGOs (interactive, consultation) Local NGOs (material incentives) Local community (passive)	National government (interactive, functional) International NGO (functional) Local community (manipulative, material incentives) Indigenous community (manipulative)
Mechanisms	Economic Awareness	Awareness	Monitoring Economic
Project Success	Successful	Unsuccessful	Unsuccessful
Effect on Illegal Logging	Not measured	Not measured	Not successfully measured
Sources: (Mugisha 2011), (Mupada 2009), (Hubertz 2009), (Byakola 2006), (Lang and Byakola 2007)			

Uganda Successful Case Summary

Clear success cases in Uganda are difficult to encounter. This may be due in part to the reality that fewer projects focused on illegal logging have been undertaken in Uganda so there are fewer to choose from, and even fewer that are successful. Despite months of searching, there is only one project that could be found that can be considered a true success. This project was sponsored by a bilateral donor and was implemented through the national government and a national NGO. Over the course of the 60 month program $.55 million was spent on engagements with many highly involved participants.

The Echuya project was successful in not only increasing awareness but also identifying economic alternatives that still promoted forest conservation. The community was overly dependent on the forest before the project because they did not know alternatives to this way of life. By removing what would have otherwise been illegal logging (which created opportunities for corruption and bribery) and replacing it with a legal form of logging (harvesting bamboo), the Echuya project has given people a new way of life. No longer must they be forced with the hard choice between illegally depleting the forests and not being able to cook, build a home, or eat. These actions have also improved relations between the local community and the National Forestry Authority, who felt previously at odds with the local community. Now, over the 3403 hectares in the Echuya forest, the local community has added 240,000 trees to begin the process of revitalizing their forests and transitioning to sustainable forestry practices (Mugisha 2011).

Uganda Unsuccessful Case Summaries

The two unsuccessful cases of Uganda are shown in Table 3 have almost nothing in common. In the first, a bilateral donor sponsors a national NGO for 48 months to raise awareness, while in the second a private organization works with Uganda National Parks over 36 months to monitor forests and stimulate economic growth. Even every level of involvement with the participants is different. The only areas they have in common are that they did not disclose the cost of the projects nor were they interested in carrying out an impact analysis on illegal logging.

The Empowering and Strengthening Civil Society for Participatory Forest Management in East Africa (EMPAFORM) project is highly donor-driven. Though the stated objective involves training local people to manage the forests in a sustainable way, with the benefits specifically directed towards impoverished local community members most dependent on the forests, Ugandans in this project did not appear to understand the concept of pro-poor over the four years of this project nor seem to be in agreement with the cost-sharing aspects of creating Participatory Forest Management (PFM). While there may have been some good achieved through knowledge sharing, the people involved (including the turnover of three different National Project Coordinators) clearly were not invested in this project any more than they were getting paid to be (Mupada 2009).

Moreover, some with the implementing NGO in Uganda went a step beyond and in fact, according to page 16 of the project evaluation, created "some benefit sharing on informal agreements, especially with regards to NTFP, but also examples of benefit sharing around impounded illegal timber in Mabira and Budongo." This act goes beyond disrespect or lack of understanding. This is blatantly making an agreement to participate in corrupt behavior as a trusted member of an NGO which has stated objectives that are against illegal logging. It is clear that this PFM creation was forced upon the Ugandans through this project without them understanding it or supporting it independently (Hubertz 2009).

In summarizing the Carbon Sequestration Forest Project (Mount Elgon) project, it is important to look to the most knowledgeable source, the donor. Once at the donor's website though, no results will appear for any information on this project. However, a simple search on the internet will bring up a through list of problems with this project including land ownership skepticism, increased deforestation outside of the forest causing land-slides, worsening water quality, and loss of diverse tree species (Byakola 2006).

To prepare the forest for management by this project, officials evicted the forest people who were living and logging illegally in a national forest. But the eviction was not peaceful. Officials were beating up, torturing, and raping the forest people as well as shooting their livestock. Anyone who was not in the area to which they were evicted would have to pay a bribe after 5 pm or face more brutality. Bribery was

also commonplace when the surveyors were changing the boundaries around the park (Lang and Byakola 2007).

The choices for local farmers were either lose their livelihood and have their lands included in the park boundaries or pay the bribe being demanded and continue farming and owning their land. Furthermore, because of all of the evictions, the population had dramatically increased around the park. This worsened illegal logging, specifically near the edge of the park instead of dispersed illegal logging throughout. The evicted people became homeless with limited options but to bribe their way into the forest to be able to survive. This unsuccessful project demonstrates not only the poor planning and lack of communication between the implementers, government, and local community, but also how corruption when unchecked can creep into so many aspects of these poorly designed projects (Lang and Byakola 2007).

ANALYSIS

Based on the components described in the methodology section of donor, implementer, duration, cost, participants, level of participation, and mechanism; it is important to describe any observations of similarities or differences within the successful and projects that were reviewed. This analysis does not contain generalizable findings, but rather is an insight into what can be summarized from these successful and unsuccessful projects. These observations are useful to only give a description of what is happening in these projects and is not testing a hypothesis. These descriptions will be considered in developing hypotheses for building a theoretical framework that can be tested in future research.

Donor

Donors of successful projects were multilateral donors, bilateral donors, and an international NGO; donors of unsuccessful projects were the multilateral donors, bilateral donors, an international NGO, and a private organization. There was only one account of a clearly unsuccessful private organization, but that does not necessarily indicate that private organizations would only or always be unsuccessful in projects to stop or prevent illegal logging.

Though multilateral donors had greatest number of unsuccessful projects and bilateral donors had the greatest number of successful projects, it seems that no donor has developed a perfected method when it comes to successful projects fighting illegal logging. It is also important to recognize that foreign governments may have a great vested interest in having successful projects in order to have some level of accountability to their citizens for the money that they are spending on other countries, and they may have worded their project evaluations to have a more positive tone or include more positive details than the project would warrant.

Project donors in Brazil were primarily bilateral and multilateral donors. This could suggest that the institutional setup and incentives of bilateral and multilateral donors worked well with the institutional setups in Brazil, especially since Brazil's forestry agency is strongest when compared with Indonesia's and Uganda's. The two multilateral projects that were unsuccessful instituted top-down approaches, whereas the three successful projects with bilateral donors sponsored two grassroots approaches and one top-down approach. This may demonstrate that in these cases, because the illegal logging in Brazil is typically small to medium-scale, grassroots approaches were more successful in these projects than top-down approaches.

Donors in Indonesia were multilateral donors and international NGOs. The two successful projects (one with an international NGO donor and one with a multilateral donor) relied heavily on grassroots approaches. In the two unsuccessful projects (again with an international NGO donor and a multilateral donor), corruption and political changes undermined the donor project plan and resulted in no or negative progress was made.

Project donors in Uganda were bilateral donors and a private organization. The successful project was designed with a grassroots approach, and of the unsuccessful projects one with a bilateral donor was designed with a grassroots approach and one with the private organization was designed as a project implemented from the top-down.

Implementer

Implementers of successful projects were local NGOs, national NGOs, international NGOs, national government, and academic institutions; implementers of unsuccessful projects were local government, national government, national NGOs, and international NGOs. Once again, it appears that none of the classifications given to implementers has a perfect record across the different contexts of the countries in these cases. While local NGOs and academic institutions were not implementers of any of the unsuccessful projects and were each in one successful project that was reviewed, it does not appear that involving these groups as implementers is necessary for a successful project in any of these cases. Further research is needed to determine if these groups may always have a positive impact when implementing a project against illegal logging.

Implementers in Brazil included government bodies in five of the six projects reviewed. This is logical because government does have some capacities to enforce illegal logging regulations and an increase in funding would logically be able to boost those capacities. The two successful projects including the government as implementers used the national government, while the two unsuccessful projects worked strongly with the local governments as implementers. The local governments may not have had the strong institutional support that the national government had and may not have had the resources in these cases to carry out the projects successfully. In addition, national government officials may have been offended that they were not a part of the project and undertaken activities to sabotage some of the objectives. The project implemented by the international NGO was a localized grassroots project that initially was in conflict with IBAMA, but was able to develop a manageable working relationship based on cooperation with the government agency by the end of the project.

Projects in Indonesia relied heavily on NGOs (local, national, and international) to implement their projects. One unsuccessful case involved the national government as an implementer, and failed in part because of the corruption and lack of work ethic that the government officials brought into the project.

The low capacity by the state in Indonesia in these projects may have made NGOs the next logical choice as project implementers because of the strong civil society presence in Indonesia.

Uganda projects used the national government and national NGOs as implementers with varying results. The national government and a national NGO worked well at a grassroots level in the only successful project identified. The national NGO at the grassroots level in the unsuccessful project was corrupt, and it should be noted came about as a result of the project, not because Ugandans initiated the development of the national NGO as a result of local demand. Corruption was also heavy in the top-down implementation by the national government of the second unsuccessful project. This project was also assuredly not in line with the local desires or beliefs and the national government implemented this project in a lawless manner.

Duration

The range of project durations was from eight to 120 months for successful projects and from 12 to 118 months for unsuccessful projects. The length of the project seemed to be irrelevant to the success or failure of a project for the cases reviewed in this research. It is worthwhile to note that Brazil projects did include the three longest projects, which may indicate a confidence on the part of the donors that the Brazilian government as an implementer has a strong capacity to manage and execute projects with long durations. The Indonesian projects reviewed contained the three shortest project durations, which may indicate that in these projects donors did not believe there was a capacity for the NGOs in Indonesia to carry out long-running projects.

Cost

As mentioned in the methodology section of this research, because costs could not be divided into areas that only affected illegal logging, it is not helpful to draw any hypotheses from the costs that were provided. Including these costs only served as a guide to help the reader understand the magnitude of the projects and create a better portrayal of the individual projects. While these numbers do include

activities that may not be directly related to illegal logging, they still provide an idea of the capacity and level of administration needed by the implementers to operate these projects.

Participant

In successful projects reviewed, four to seven groups of participants were involved in projects, including local NGOs, national NGOs, international NGOs, local government, national government, foreign governments, local community, private organizations, academic institutions, the donor, indigenous community, and media. In unsuccessful projects reviewed, three to five groups of participants were involved in projects including local government, national government, local NGOs, international NGOs, academic institutions, local community, and indigenous community.

The donor, the media, and national NGOs all appeared in successful but not unsuccessful cases in the projects that were reviewed for this research. In those successful projects though, the donor, media, and national NGO involvement did not appear necessary in order to achieve the successful project. While the basic information regarding participants is central to this research, the number of participants or category of participant alone may not present a full picture of these projects. It is also essential to characterize the types of participation of each group involved with the project.

Type of Participation

This data is slightly more difficult to interpret because there are so many variables involved in the coding. It is also important to again note that these levels of participation are based on the interpretation of documents related to project evaluations, and therefore, may be different from results that would have been obtained through primary sources such as interviews with stakeholders.

Successful and unsuccessful projects each used all forms of Pretty's typology of participation: manipulative participation, passive participation, participation by consultation, participation for material incentives, functional participation, interactive participation, and self-mobilization. No two projects reviewed in this research had identical levels of participation. Each project was a unique blend of actors

at different levels of participation with no real pattern between those with success and those without success, even when broken down by country. Therefore, the absence or presence of these types of participants was not observed in these projects to indicate the success or failure or a project to combat illegal logging. However, the breadth of the information gathered regarding participation, as obtained from the project evaluations may be overwhelming any hypotheses that may have been realized by focusing on fewer participation variables. Further research is needed in this area to determine any potential hypotheses regarding types of participation in illegal logging project successes and failures.

Mechanism

Mechanisms used in successful and unsuccessful projects both were economic, legal, awareness, and monitoring. Thus, the inclusion or exclusion of these mechanisms in projects does not appear to lie at the root as to why these illegal logging projects were successful or unsuccessful. It appeared that in the unsuccessful cases, there was an unwillingness to carry out a monitoring component even if it were part of the project plan. This may indicate that these projects anticipated that they may fall short and therefore only developed a methodology to monitor the forests without implementing it.

In Brazil, mechanisms almost always involved a form of legal reform and monitoring component. These components made sense because these projects were also relying on the government as implementers, whose roles include legal and monitoring responsibilities. This may be another indicator in the projects reviewed that donors believed the government in Brazil had the capacity to create legal reform and participate in monitoring forests. One success case did not include either of these components, nor was it implemented by the Brazilian government; instead it focused solely on changing the economic incentives to illegally log, and through that mechanism was successful at protecting forests.

In mechanisms used in Indonesian projects reviewed for this research, three of the four projects used a legal and awareness component while only one used an economic component. The economic mechanism in the first successful project in Indonesia was demanded by the community and well-planned, and it also was the major point of success in the project for changing incentives of the local community to allow

illegal logging. The projects reviewed in Indonesia without an economic component may have turned an awareness mechanism as a way to change how people's incentives for responding to illegal logging (and perhaps the Indonesian culture as a whole).

The successful case reviewed in Uganda utilized economic and awareness components to work at a grassroots level to develop a project tailored to the economic needs of the community and informing them of their rights and roles. In the first unsuccessful case, awareness was used as a very weak component. As opposed to the Indonesia project that only focused on awareness, the Uganda project was poorly organized and poorly run. It had much less technical support from the bilateral donor when compared with the support in Indonesia from the multilateral donor. The other failed project in Uganda involved top-down monitoring and economic incentives for the local community without consulting or planning for what their needs were. This project also clearly failed to put in place safeguards against corruption, which ultimately amplified its breakdown.

SUMMARY OF CASE STUDIES

A summary of successful and unsuccessful case studies link best practices and lessons learned from the most successful and unsuccessful projects in each country. These themes contribute to understanding what is working and what is not and provide a context for why projects were observed to be successful and unsuccessful. Building on the review, a theoretical framework can be developed incorporating the observations from the 12 projects that were reviewed in this research.

Ineffective Relocation

As seen in the Uganda case, relocation is not the best approach to combatting illegal logging. The Carbon Sequestration Forest Project demonstrates that forced relocation can be a driver of corruption, providing the evictors an opportunity to take advantage of evictees. This petty corruption involved people who were asked to pay bribes by the surveyors to keep their property subjectively excluded from the national park boundaries. People were asked to pay bribes to government officials to go into the forests and

extract timber illegally for fuel and building materials. There is no evidence through forest monitoring to suggest that there has truly been a decrease in illegal logging or deforestation overall as a result of relocation (Mupadad 2009).

Successful Economic Mechanisms

After reviewing the Brazil and Uganda cases, it becomes easy to see why the carbon payment programs are highly controversial. On one hand, the REDD project in the Brazil case has been praised as a cost-effective approach to reduce not only illegal logging but also improving the livelihoods of those who live near the forests (McNeish et al. 2011). On the other hand, the Carbon Sequestration Forest Project in Uganda was identified by one source as one of the worst things to happen to the Ugandans living near the forest. Indigenous peoples were brutally evicted and not given compensation or alternatives. The revenues for the project were not being equitably distributed, indigenous rights were not being respected, and illegal logging was still not being adequately addressed. Corruption ran rampant and worsened the relationship between the government and the local community (Mupadad 2009).

It can be clearly seen with these REDD projects the treatment of the local people and implementation of the project conditions were handled quite differently. The capacity of the state in Brazil far outweighed the capacity of the state in Uganda to judiciously implement the project. Though both projects were similar in design and intent, the Brazilian government was institutionally sounder and better equipped to monitor and enforce the project provisions. In addition, the government and the donor created an agreement with the flexibility for the Brazilian government to choose the best methods to carry out the project. With this continued mentality of consideration taken by the role of the implementer, this project can continue in its success (McNeish et al. 2011).

Other economic mechanisms that projects in conservation tend to move towards are ecotourism models. Many projects could easily be convinced to try to follow the route of the Ecotourism project in Indonesia, in which everything seemed to fall into place and work out beautifully. It may be easy for others to underestimate the amount of time and consideration that goes into such a successful project.

The two elements that were present in the success cases here but not in the unsuccessful case are quite simple to identify: ample thought and dedication. The local community in Indonesia had been planning an ecotourism project for a year, and it was evident that, had they not received funding from the international NGO, they would have still managed to successfully implement an ecotourism project. This may be because they did not start a project with the hope that it would be able to sustain itself somehow; they developed a sound plan. This organized NGO did independent research and knew about other competitors in Indonesian ecotourism, and what they could do to stand out. Strong capacity and planning abilities of the NGO carrying out its project were as necessary for success as in this case as in the Brazilian government in the REDD project ("Final" 2004).

Coordination

The most incredible insights can come from effective coordination and accountability that were seen in every successful project and not strongly present in any unsuccessful project. Clearly laid out plans, roles, and responsibilities within a project are vitally important. As seen from the failure projects, all it takes is one unexpected angry stakeholder who can interfere with and even ruin the best-laid plans, such as in the Indonesia Siberut project.

Preparing for the bribery scenario that happened in the Siberut project would have been unreasonable to expect of any organization. The national NGO did the best it could and maintained its commitment and thoughtfulness to fight the logging company to the end of the project timeframe. By initiating the working groups, which determined that logging in the designated area would have been detrimental in multiple areas, the national NGO maintained its coordination efforts even though the project failed ("Final" 2005).

The successful projects had more than coordination; they had good relationships with all stakeholders. Even in the Ugandan successful Echuya Project the relationship between the community and the government may have begun tense, but by the end of the project it had significantly improved into a positive working relationship. A lot of the relationships developed in the projects reviewed have

appeared to be personal such as the Indonesian successful Ecotourism relationships with the Ministry of Finance and National Park. Government ministers were very happy to work with this new group, but clashed with the Siberut Island project that also was working with those same industries.

Satellite Technology

Most surprising was the very limited amount of monitoring of forests when part of the project goal was to preserve them. The amount of knowledge that was gained on the actual difference in illegal logging before and after the project is otherwise lost. It is astounding particularly because forests are quite easily monitored: trees are either present or not present. With the advent of geographic information system (GIS) technology, it is a wonder that these projects did not incorporate this technology to monitor and evaluate if a project was in fact successful. Out of all of the projects reviewed, only two included an evaluation for the success of the project using GIS, and both were on extremely tight budgets. This is an effective evaluation tool that is simply not being used in development projects targeting illegal logging.

Beyond GIS, Brazil has a world-renowned system which takes advantage of satellite technology to monitor land-use change. This has resulted in more information for the Brazilian government about where the illegal logging problems are in such a large country with many protected forests. This capacity combined with online databases provides transparency to other government officials and the public about exactly where illegal logging problems exist and can give nearly real-time access to audit and verifying the forest agencies and logging companies. In addition, the public access to this information allows anyone, especially NGOs who are passionate about saving forests, to use this information to stay well-informed on the government, private, and illegal actors (McNeish et al. 2011).

Appropriate Community Management

The successful Brazilian MSDR project demonstrated local demand and ownership of the forest, while the unsuccessful Ugandan EMPAFORM project demonstrated neither of those aptitudes (Koziell and Inoue 2006)(Mupadad 2009). The successful Ugandan Echuya Project fell somewhere in the middle because the

local community initially needed to be convinced of the benefits of participatory forest management before they became in agreement with a local management system. After becoming informed and aware of the benefits, they are now very satisfied with the system developed by the project.

The lesson to observe in these cases is to begin a project to create local forestry management after there is agreement with the local community. In order for it to be as truly owned and as successful as the MSDR project, there first must be a full commitment to and ownership of the forest by the local community who will be responsible for this forest. Finding a person or group who is already committed and thoughtful has been observed in the cases reviewed to likely lead to success (especially if it is a well-coordinated group or individual).

THEORETICAL FRAMEWORK

In review, the literature generally agreed that the two basic plans for fighting illegal logging and corruption were through a top-down approach or a grassroots movement. In studying these 12 projects, it seems that both types can fail or become successful based on factors including state capacity, the form of corruption, and the implementing agent. The most striking aspects of the successful case studies involved a high amount of coordination, thoughtfulness, and commitment.

In Brazil, the state has a medium capacity to fight illegal logging from mostly medium and small-scale illegal loggers. The corruption tends to be petty; with a commitment of integrity from the top-down and high accountability mechanisms in place to safeguard against corruption within IBAMA, a partnership with national government appears to be a strong model for success in the projects reviewed. The capacity by the government to monitor and its enforcement capabilities make the national government an essential component to projects. Not only that, IBAMA appeared to become insulted by not being included in a project design and retaliated against the project. Because of these cases, one hypothesis generated from this research is that countries with medium capacities to fight small to medium-scale illegal logging, where the corruption is petty, and where strong monitoring and accountability mechanisms are in place for the national government will add to the success of projects fighting illegal logging.

In Indonesia, relying on the national government with its high levels of grand corruption appeared to be the downfall of at least one project targeting illegal logging. In addition, the high influence that the large-scale logging exhibit in Indonesia bred grand corruption and undermined any legitimate government attempts at controlling illegal logging. The low capacity of the Ministry of Forestry, with minimal support from the local authorities, made this an ideal setting to utilize NGOs as project implementers. Since it is known that there is also rampant petty corruption, NGOs are especially ideal to bypass potential corruption problems that donors may have in giving aid directly to the government. These cases provide the basis for a hypothesis that in countries with large-scale illegal logging, where corruption is present in grand and petty forms, and with no strong monitoring and accountability mechanisms in place, NGOs are essential to rely upon to implement successful projects.

Uganda has even less capacity in its forestry agencies than Indonesia, and even more petty corruption, which is seen in the small scale illegal logging in Uganda. Because the corruption there is so decentralized and engrained in everyday life, the research observed one project involving an NGO tasked with improving the illegal logging that was actually perpetuating it. Corruption can also be observed at a grand scale in Uganda at very high levels in both forestry agencies. In this case, it appeared that neither the government nor an NGO were ideal to implement the project because both would only be seeking the funds that the project would provide and not be authentically interested in decreasing illegal logging.

While it may be tempting to consider an outside implementer (either in physical location or cultural traits), the acceptance of the community may suffer from using an outside implementer and result in hindering the project tremendously. Additionally, it is important to be building capacity for Ugandans that they may be able to confront illegal logging without donor assistance. The rampant low-level corruption that is so common throughout the country serves as a warning that extra precautions must be put in place. Thus from the observations in projects reviewed, a hypothesis for countries like Uganda that suffer from petty corruption and grand corruption, small-scale illegal logging, and have no strong monitoring and accountability mechanisms in place, NGOs may still be considered essential as

implementers after a thorough vetting process to ensure legitimacy and include a project design with stringent transparency and accountability mechanisms in place.

In this research, what stood out more than the expected project components were the coordination and relationships that the successful projects were able to cultivate. There is another element here that is more personal which previous literature on corruption and illegal logging have either ignored or downplayed. There is an element of almost comradery that has been present in the successful cases that is lacking in the others. It seems that success in projects, while it requires a good plan and design, may be more dependent on personal connections that have been built between local communities, NGOs, governments, and donors.

In the unsuccessful projects, it was easy to determine all in which actors did not have a good relationship with the others and how that relationship strained the projects. In the other unsuccessful projects too, it seemed that critical relationships with other stakeholders involved in the project were not present. While it could only be speculation to determine how and why these relationships came about and what they mean, future research focusing on interviewing the stakeholders of successful projects and studying those relationships may prove to be quite valuable.

In order to have a successful project, whether it is a top-down or grassroots approach, all of the projects reviewed here had good relationships with the stakeholders in the projects, regardless of the culture, institution, or country. This is not to say that they were good relationships to at the beginning of all the projects, but by the end of the successful projects it was clear in the project evaluations that there was no longer tension or mistrust. The capacity to build a positive relationship needs to be present at the beginning of the project though as a precursor to success.

Additionally, coordination and accountability were present in all of the successful cases. Each stakeholder had a well-defined role that they accepted and carried out, bringing all of the people involved in the project together in an organized structure. In cases where one group was not managing another but acting as equals, it was important to communicate roles and expectations to be met. All stakeholders did

not necessarily need to be actively involved in the project formulation to have a role that they accepted and with which they agreed.

All of these good relationships may be perceived as potentially corrupted or corruptible, especially when dealing with some of the most corrupt government agencies and local communities in the world. It was clear in the Uganda EMPAFORM case that the donor perceived a good relationship while the local community was simply taking advantage of the donor. Other good relationships may be based off of kick-backs or other illegal payments for support.

To fight these perceptions and temptations, projects detecting and preventing illegal logging must have one essential component that so many of the projects reviewed were lacking: GIS. Typically, a good relationship built on bad premises would involve a type of facade that forests are being protected when in reality they are being exploited. Using a satellite monitoring system to ensure that the forests are being protected can eliminate many of the ethical questions that may arise from a good relationship with an individual or organization known to be corrupt. Building in a monitoring plan that is not strongly based on human subjectivity will reduce the potential for corruption in these projects aiming to stop illegal logging. Combined with good relationships, coordination, and well-defined roles, this monitoring plan can add some certainty and legitimacy to projects fighting illegal logging in a low-cost way.

CONCLUSION

Combining academic and project data has led to a more well-rounded understanding of the projects that are being implemented in countries with high levels of illegal logging and corruption, and cases that have worked well and failed. These cases, especially the failed cases, are not reviewed frequently enough by people outside the organizations and by people who are not involved with the projects. Learning from development organizations as well as academic evidence can bring about a blend of detailed thoughts and comprehensive activities to show a more accurate picture of the world of illegal logging.

Three hypotheses have been developed in this research based on state capacity, the form of corruption, and the implementing agents to confront illegal logging in the three different contexts. In addition to these hypotheses, general best practice techniques were observed and included good relationships with stakeholders where there is clear coordination and unambiguous roles. These important relationship aspects of projects need to be balanced by an objective measure of success, such as satellite monitoring of the areas that will be protected from illegal logging.

It is only through future research involving more direct data collection from these projects that an even more developed understanding of corruption and illegal logging can be established. Though this research was an important first step, it can be used as a catalyst for future research to build upon and test. Only by continuing to ask questions about successful and unsuccessful cases will researchers and development workers be able to find appropriate way to understand and combat illegal logging.

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