

# Assessment of Enforcement of NIPAS Law and Related Enforcement Instruments in Protected Area Planning and Development: The Case of Roosevelt Park and the Subic-Clark-Tarlac Expressway

Merwyn Paul D. ROSTRATA  
Attorney VI  
Legal Services Department  
Bases Conversion and Development Authority  
2/F Bonifacio Technology Center  
31<sup>st</sup> Street Bonifacio Global City, Taguig 1634  
Email: mdrostrata@bcda.gov.ph

Hussein S. LIDASAN  
Professor  
School of Urban and Regional Planning  
University of the Philippines  
Diliman, Quezon City  
Email: thosl76@yahoo.com

Primitivo CAL  
Past President  
Transportation Science Society of the Philippines

**Abstract:** The Philippines severely lacks road infrastructure necessary for economic development. And pursuit of economic development while protecting the environment lies significantly on law enforcement. While the Subic-Clark-Tarlac Expressway (SCTEX) is one of the newest and major toll road project that is envisioned to spur and hasten the economic growth in Central Luzon, its construction however, brought great environmental impact to Roosevelt Park, a protected area under the National Integrated Protected Areas System (NIPAS) law, or Republic Act No. 7586. This study is an assessment of the enforcement of the NIPAS law and enforcement instruments that protect Roosevelt Park. It was found that the factors that affect the enforcement of NIPAS law for Roosevelt Park during the SCTEX construction involve personnel, financial constraints and coordination between government agencies. Despite difficulty, the SCTEX project owner, BCDA, was able to substantially comply with the requirements of the NIPAS law. In addition, other enforcement instruments such as the Protected Area Management Board (PAMB), multipartite monitoring team (MMT), Memorandum of Agreement (MOA) between BCDA and DENR-PAMB, Environmental Compliance Certificate (ECC) and right-of-way and tree cutting permits contributed to the protection of Roosevelt Park. They became force multipliers, able to specify and address the minute but important concerns in law enforcement.

**Key words:** protected area, toll road, law enforcement

## 1. INTRODUCTION

The Philippines is known for making well-crafted laws written in superb language but is often short in elaborating the means of implementing its laws. The discrepancies between the ends and means are often blamed on weak enforcement and implementation capabilities of government agencies and instrumentalities. And the natural environment has been sacrificed time and again at the altar of infrastructure and economic development.

When Congress enacts a law, its action does not automatically translate to conforming behavior. For sure, human laws are not necessarily obeyed (Fletcher, 1996:28-29). This study assesses the enforcement of the National Integrated Protected Areas System (NIPAS) law in protecting Roosevelt Park during the construction of the Subic-Clark-Tarlac Expressway (SCTEX). It also identifies other enforcement instruments (government bodies, memorandum of agreement,

environmental compliance certificate, and road right-of-way and tree cutting permits) that protected Roosevelt Park during the SCTEX construction.

The establishment of an effective and efficient law enforcement system to protect the environment is critical. Thus, the analysis of compliance and enforcement has become a topic of great interest in recent years (Heyes, 2001: 8-9). In this country, landmark environmental laws have been passed that substantially protect the environment. However, the Philippine government has also been notoriously poor in law implementation due mainly to financial constraints, human and institutional inattention, and graft and corruption.

Nevertheless, there are good examples of huge infrastructure projects that have had enormous environmental impact that have been significantly mitigated in accordance with law. The SCTEX has been hailed by the Philippine government as one such project.

### **1.1 Statement of the Research Problem**

It is a common problem that Philippines laws, though carefully crafted and studied, are poorly enforced. It is also apparent that the Philippines severely lacks the road infrastructure necessary for economic development. It may be noted that the SCTEX is the newest and longest toll-road in the country today and has been deemed as a world-class road facility providing the shortest, direct and efficient link among vital development areas in Central Luzon.

On the other hand, the NIPAS law has been hailed as one of the more important legislations in the country that protects critical areas in our natural environment. Though the NIPAS law provides strict and greater protection for Roosevelt Park, the SCTEX road alignment traversed it thereby causing great environmental damage and has seriously altered the landscape along its alignment. There arises therefore the great difficulty of balancing road infrastructure and environmental protection. Both are goals enshrined in the laws and policies of the country, thus making law enforcement and compliance critical.

### **1.2 Objectives**

This is a descriptive study with a general objective of assessing the enforcement of the NIPAS law and other enforcement instruments in protecting Roosevelt Park during the construction of the SCTEX. The specific objectives are:

1. To determine the factors that affect enforcement of the NIPAS law during the construction of the SCTEX;
2. To determine the actions that BCDA took during the construction of the SCTEX in order to comply with the NIPAS law and other enforcement instruments; and
3. Describe the other enforcement instruments for the protection of Roosevelt Park during the construction of the SCTEX.

### **1.3 Significance of the Study**

The results of this study may be helpful in guiding the enforcement of NIPAS law and related laws that protect the environment when a road project similar to the SCTEX is undertaken. The findings may be helpful in improving the law enforcement system of the DENR and PAMB, and compliance of BCDA with the NIPAS law. It could help identify measures that improve factors affecting enforcement of the NIPAS law for future project owners. And this study may lend assistance to planners by highlighting the role of law enforcement in mitigating negative environmental impacts of a toll road project.

## 1.4 Scope and Limitations

This study only covers Roosevelt Park and its protection under the NIPAS law and above-mentioned enforcement instruments, not other environmental laws. The assessment of enforcement is also limited to the affected area, or only the portion of the SCTEX that traverses Roosevelt Park and only during the construction of the SCTEX. It does not include the assessment of the environmental laws that affect the entire alignment of the SCTEX that stretches from Subic to Tarlac and does not include assessment of the NIPAS law for the *entire* Roosevelt Park. It also does not cover the actions taken by the BCDA and PAMB after the completion and actual commercial operations of the SCTEX. This study is limited in that only the *negative* environmental impacts of the SCTEX were identified. It does not include the positive contribution of the SCTEX to the environment which may be covered by future studies.

In this study, enforcement would be limited to the relevant provisions of NIPAS law that are enforceable against BCDA. On the other hand, enforcement shall be given a broader meaning and will not be focused to the apprehension and prosecution of offenders. It does not focus on assessment of law enforcement activities of Roosevelt Park authorities that involve daily security actions such as conduct of patrols, apprehension, and prosecution of offenders that are directed against other subjects such as third party intruders.

Although this study makes reference to the Environmental Impact Assessment (EIA) for the SCTEX, it does not study and analyze said EIA. References made to the EIA are meant only to give the reader a clearer understanding, background and additional information insofar as they are related to this study. This should not be construed as having included an analysis or assessment of the EIA.

## 2. REVIEW OF RELATED LITERATURE

Ocon (2000), in her master thesis, assessed the enforcement of environmental compliance certificates (ECC) of industrial firms in Bataan. She concluded that the system of the Environmental Management Bureau (EMB) and the EMPAS in enforcing ECC conditions has not been effective due mainly to resource constraints and unclear and absence of implementing guidelines.

Ocon found that having limited resources has resulted to having non-plantilla positions of the Environmental Impact Assessment (EIA) staff. The EIA divisions in the EMB are only ad-hoc in nature and are burdened with other responsibilities aside from their functions in the EIA division. In addition, because of limited EIA manpower, the monitoring has become selective, or that field monitoring would be conducted only when there are complaints related to a project. "Table" monitoring has been resorted to for periodic ECC compliance monitoring. This type of monitoring consists merely of a list or a table of ECC conditions that are ticked based on reports submitted by the project proponents.

Unclear and the lack of monitoring guidelines led to non-compliance with ECC conditions. Particularly, these have affected the creation of a Multi-Partite Monitoring Teams wherein the selection of members and their roles have not been clearly delineated. The Environmental Monitoring Fund had not been established because the four firms that were subject of the study did not allocate any amount. It was alleged that there was no basis in allocating money to the fund because the EMB or the EMPAS failed to comment on the firms' Environmental Monitoring Plans where the budget for monitoring activities appears. The proponents also had difficulty determining the amount to be allocated to the Environmental Guarantee Fund because the EMB did not come up with valuation framework and methods. The proponents likewise failed to

conduct a comprehensive ecoprofiling and carrying capacity studies because there were no guidelines on how to conduct the same.

The probability of catching violations of the ECC is minimal because of the limited manpower of the EMB and EMPAS in conducting field inspections. On the other hand, the penalty or fine for failing to comply with the ECC conditions is so light that proponents could easily afford to pay. In addition, the EMB and EMPAS do not have well-defined procedural guidelines on assessing and collecting fines.

The Municipal Government of Limay, Bataan, though interested to take part in the monitoring compliance with the ECC, lacked technical capability to do so.

The ECC became a mere regulatory tool, not a planning tool as originally intended. The conditions in the ECC requiring renewal of the "permit to operate" became the focus of monitoring instead of mitigation of negative impacts. Compensating the victims of the negative impacts from the firms studied could not be realized because the EMB and EMPAS have not established a valuation framework and the database was limited. Apparently, the study is an assessment of the enforcement of the ECC, not the NIPAS law.

A general pronouncement regarding the NIPAS law was given in a paper authored by Blas Tabaranza, et al. that was presented during the Protected Areas Third Southeast Asia Regional Meeting held on April 1-5, 2003 in Davao City. The authors expressed that based on the experiences in policy implementation, the NIPAS law was deemed flawed in its implementation because of lack of technical expertise.

Calanog & Calderon (2000), in their paper in the same Protected Areas Third Southeast Asia Regional Meeting conducted an assessment on the effectiveness of the PAMBs. They found that PAMB members' participation in PA protection and law enforcement to be minimal. Their participation in the filing of charges against violators of park rules was negligible because this was considered to be the normal function of DENR officials and park authorities.

An Asian Development Bank report (2000) found that in Sri Lanka, reform was needed in the environmental sector's legal and institutional framework in conjunction with capacity building, ecotourism development, and the establishment of a sustainable financing mechanism for PA management. By developing and pilot-testing decentralized and people-oriented approaches to PA management, including community improvement and benefit sharing, the Project will be instrumental in establishing a PA system in Sri Lanka that protects wildlife biodiversity effectively and generates employment and income.

A notable weakness in the sector is inadequate implementation of national policies or PA management plans, including the difficulty that under-resourced agencies experience in enforcing related laws. This implies that written policies and plans should never be seen as ends in themselves, and that far more attention should be given to (i) embedding consensus-based policies within a network of committed institutions; (ii) introducing adaptive managerial systems, based on dialogue, forums, conflict-management processes, incentive structures, and transparent and accountable monitoring and evaluation procedures; and (iii) providing adequate resources for agencies to identify, intercept, process, prosecute, and sanction violators of the laws that are envisioned by policies and assumed by management plans. Such a change of emphasis, however, will require a willingness by the Government and its development partners to invest more design effort in institutionalizing new arrangements by which policies and management plans are created and used, and more resources in the agencies responsible for controlling and managing these resources.

The above literature deal with gaps in enforcement of environmental laws for protected areas. Of special concern are the capacity of institutions that affect enforcement and the enforcement mechanisms and processes. However, after a painstaking search for reading materials and journals, this study could not find any that deal directly with an assessment of NIPAS law or similar law vis-à-vis a road project and a protected area. Whatever materials there are on the matter may not have been published.

### **3. RESEARCH METHODOLOGY**

This is a *descriptive* study in that it explores and describes the enforcement of NIPAS law and related enforcement instruments for the protection of Roosevelt Park during the construction of the SCTEX. It primarily *determines* the factors that affect enforcement, the environmental impact of the SCTEX and BCDA's compliance with NIPAS law, and describes the other enforcement instruments.

#### **3.1 Data and information needed**

This study first determines and describes the factors that affect enforcement of the NIPAS law. Validation of these factors were obtained from a review of the NIPAS law, its implementing rules and regulations, office records and reports, and financial reports and documents of DENR, PAMB and the BCDA. The next set of data and information necessary are the negative environmental impacts of SCTEX to Roosevelt Park. Afterwards, this study determines the actions that BCDA took in order to comply with the NIPAS law and related enforcement instruments in order to mitigate the negative environmental impacts.

#### **3.2 Means of gathering data and information**

Key informant interview and a perception survey were conducted simultaneously, using a single questionnaire, in order to obtain information on the rules, regulations and procedures under the NIPAS law that protect Roosevelt Park; the human resources; financial resources or budget allocations of DENR, PAMB and the BCDA; and other factors that affect enforcement. The key informant interview was also used in order to elicit information on other enforcement instruments and the actions that BCDA took in order to comply with the NIPAS law. A site/ocular inspection of the SCTEX along Roosevelt Park was also conducted in order to validate the engineering and infrastructure mitigation measures that BCDA undertook.

After generating the data above, the system of actual enforcement, and constraints were discussed. To determine the actual compliance of BCDA with the NIPAS law, a checklist of relevant provisions of the NIPAS was prepared. The key informants (in the same questionnaire) were asked whether the NIPAS provisions were observed by the BCDA. The responses of the key informants were supplemented by monitoring reports and site/ocular inspection. A perception survey (appearing in the same questionnaire) of the same key informants was used to probe further into factors that affect enforcement, compliance with the NIPAS law, and coordination of DENR, PAMB and BCDA.

The perception survey and interview of key informants was conducted in a sit-down setting. Each key informant answered the questionnaire and was interviewed for about an hour each. The key informants have been pre-selected based on their close involvement with the SCTEX, Roosevelt Park, and actual involvement in the planning, implementation and monitoring of the SCTEX during construction. They were chosen because of their close familiarity with the actual field/ground conditions in Roosevelt Park when SCTEX was being constructed. Knowledge of the negative environmental impacts of SCTEX to Roosevelt Park and the actions taken by BCDA

in order to mitigate the negative environmental impacts were key in the selection of key informants.

## **4. FINDINGS**

### **4.1 Factors that affect the enforcement of NIPAS law**

#### **4.1.1 Clear understanding by BCDA and PAMB members of the NIPAS law and limits in authority of the PAMB**

All the key informants, some of who were PAMB members, were familiar with NIPAS law. However, such familiarity except for the PASu and the PENRO, did not translate to adeptness, proficiency or in-depth knowledge with the NIPAS law. During PAMB meetings and deliberations, such familiarity occurred only on a “need” basis, or when a particular concern arose related to a provision of the NIPAS law. In addition, the BCDA was likewise not very familiar with provisions and requirements of the NIPAS law.

Since the findings, decisions and resolutions of the PAMB are still subject to the review and approval of the DENR Secretary, such decisions and resolutions do not have enforceable “teeth”, thus limiting PAMB’s authority. At times, PAMB becomes a mere recommendatory, not policy making body.

#### **4.1.2 Lack of personnel of office of the PASu**

Under the NIPAS law, the Park Superintendent (PASu) shall be the chief operating DENR officer at the site. For the SCTEX, the main task of the office of the PASu consists of monitoring its construction.

The present personnel under the office of the PASu for Roosevelt Park consists of only four (4) persons which includes the PASu, the Assistant PASu and two (2) rangers who would have to oversee, manage and protect the 786 hectare park. The PASu was a graduate of forestry, held a master degree in Parks Recreation and Tourism Management and had worked in the DENR for the past 18 years. The Assistant PASu was educated in community organization while the rangers had forestry and law enforcement trainings.

Although SCTEX affected only a small portion of Roosevelt Park (10.92 hectares), the additional work load of monitoring the SCTEX during construction proved difficult for the office of the PASu because of its many other responsibilities. The PASu also acted as the concurrent chief of the Protected Areas Wildlife and Coastal Zone Management Sector. Besides the PASu, the other DENR personnel assigned to monitor and attend to all the concerns related to construction of the SCTEX in Roosevelt Park were the members of the Multipartite Monitoring Team (MMT) for Bataan. No other DENR task force or *ad hoc* body was created to specifically attend to the monitoring of SCTEX during its construction in Roosevelt Park.

The PASu, just like many government offices cannot hire new staff easily. It cannot react readily to an increase in demand or responsibilities. Since the number of Roosevelt Park workers is fixed, the PASu does not have capacity against sharply rising demands for additional work in the case with the coming of the SCTEX. The PASu cannot contract or expand readily in response to the ebb and flow of additional work. However, the monitoring of the SCTEX construction by the PASu only complimented the multipartite monitoring team (MMT) that was created under the ECC.

**4.1.3 DENR-PAMB’s limited financial resources or budget allocation for Roosevelt Park**

Table 1 below shows the Integrated Protected Areas Fund (IPAF) and the Central Integrated Protected Areas Fund (CIPAF). Under Section 16 of the NIPAS law, the IPAF is a trust fund for purposes of financing projects for the entire System. The IPAF may solicit and receive donations, endowments, and grants in the form of contributions. All income generated from the operation of the System or management of wild flora and fauna shall accrue to the IPAF and may be utilized directly by the DENR for the above purpose. Disbursements from the IPAF shall be made solely for the protection, maintenance, administration, and management of the System, and duly approved projects endorsed by the PAMBs, in the amounts authorized by the DENR. The CIPAF on the other hand is the fund for all the IPAFs collected from all the protected areas under the NIPAS law. Apparently, all IPAFs collected are first remitted to the DENR and placed in the CIPAF. Only of portion of the IPAF collected from a particular protected area would be remitted back to it by the DENR.

Table 1. Roosevelt Park Income Collection and Releases

Period	Total Collection (pesos)	CIPAF 25% (pesos)	IPAF 75% (pesos)
Oct. - Dec. 2002	39,350.00	9,837.50	29,512.50
2003	196,145.00	49,036.25	147,108.75
2004	301,114.00	75,278.50	225,835.50
2005	356,227.25	89,056.81	267,170.44
2006	327,848.00	81,962.00	245,886.00
2007	806,875.00	201,718.75	605,156.25
2008	421,711.00	105,427.75	316,283.25
Total Collections	2,449,270.25	612,317.56	1,836,952.69
Less: Releases			
2004			163,171.00
2005			244,000.00
2006			266,945.00
2007			558,096.00
2008			350,883.00
Total releases	1,583,095.00		1,583,095.00
Available balance	866,175.25	612,317.56	253,857.69

Source: DENR-PENRO, Bataan

In year 2007, Roosevelt Park was able to collect a total of P500,000.00 from the SCTEX contractor as fees for the entry of its vehicles and equipment into Roosevelt Park. This entire amount was remitted to the IPAF but only 75% thereof was given back to Roosevelt Park. Table 1 shows that Roosevelt Park received a total of only P1,583,095.00 in years 2004 to 2008 from DENR for all its programs under the Roosevelt Park Development and Management Plan. This averages only to P316,619.00 a year which is less than sufficient to fund programs and enforce the NIPAS provisions.

To note, each PAMB member received a P200 honorarium for attending a PAMB meeting. This was increased to P500 per meeting but such amount was at times not enough to cover the travel and incidental expenses of some members who had to travel long distances to attend meetings that were held at the Nature Center Club House/Pavilion inside Roosevelt Park. In addition, when special meetings are called, some PAMB members could not attend because of busy schedules or other administrative concerns. Thus, PAMB could not at times reach a quorum which hampers their operations.

However, the lack of financial resources proved not to be a hindrance for the DENR, PASu and PAMB in the monitoring and enforcement of NIPAS provisions and other enforcement instruments. This is because the main tasks for the SCTEX consisted of monitoring and calling BCDA’s attention to potential violations. This did not require much money for they could be

accomplished by simple ocular inspections, review of environmental monitoring reports, coordination meetings and exchange of correspondences between DENR and BCDA.

#### 4.1.4 BCDA's financial resources or budget allocation to comply with NIPAS law, ECC and the MOA

Table 2 below shows BCDA's budget allocation for the years 2003 – 2006 for compliance with the NIPAS law, ECC dated 5 January 2003, and the Memorandum of Agreement (MOA) between BCDA and DENR-PAMB. The BCDA budget for years 2007 to 2009 could not be obtained in time for this study.

Table 2. BCDA Budget for Environmental Compliance

Project Title & Description	Budget in (₱) 2003	Budget in (₱) 2004	Budget in (₱) 2005	Budget in (₱) 2006
Tree cutting and replacement		40,000,000.00		
Environmental Guarantee Fund		1,000,000.00		500,000.00
Environmental Monitoring Fund/Multipartite Monitoring Team	1,998,000.00	2,000,000.00	2,000,000.00	2,000,000.00
Inventory of flora and fauna	1,373,039.36			
Environmental Compliance – compliance with DENR requirements			5,000,000.00	
Livelihood Projects – compliance on the social aspect of the ECC and JBIC guidelines			8,500,000.00	10,000,000.00
Reforestation of Roosevelt Park				5,000,000.00
Rehabilitation of Roosevelt Park Facilities				2,000,000.00
ECC Compliance				1,000,000.00
Total	3,371,039.36	43,000,000.00	15,500,000.00	20,500,000.00

Source: BCDA Budget Management Department

The P40 million BCDA budget for “Tree cutting and replacement” above is for all areas along the SCTEX alignment including Roosevelt Park. The “Environmental Guarantee Fund” (EGF) is a requirement under condition 6.1 of the ECC. It is for the rehabilitation of areas affected; just compensation of parties and communities affected; the conduct of studies to aid in prevention of environmental damage; and for contingency clean-up activities, environmental enhancement measures, and damage prevention program.

The “Environmental Monitoring Fund/Multipartite Monitoring Team” (EMF/MMT) budget is required by condition 6.3 of the ECC to cover all costs attendant to the operation of the MMT such as training, sampling and analysis, hiring of technical experts, meals, accommodation, transportation and honoraria. The “Inventory of flora and fauna” was conducted before the actual civil works for SCTEX commenced. The “Environmental Compliance” budget in year 2005 is for all DENR requirements besides the EMF/MMT and “Livelihood Projects”. The “Livelihood Projects” is required by condition 13 of the ECC. The “Reforestation of Roosevelt Park” and “Rehabilitation of Roosevelt Park Facilities” are requirements under the MOA between BCDA and DENR-PAMB.

For the affected area, a total of P1.2 million financial assistance were given to 20 farmers/informal tillers as compensation for their trees and small structures inside Roosevelt Park, or an average of P60,000.00 per farmer/informal tiller. The trees and small structures had to be removed or demolished because they stood along the SCTEX road alignment.



BCDA also pays DENR rent for the 10.92 hectares that is actually traversed by the SCTEX at the rate of P500/hectare per year. This rent should go to the IPAF under Section 16 of the NIPAS law.

It appears that BCDA could allocate sufficient budget to cover environmental concerns as long as it is required by the NIPAS law, ECC, MOA or the road right-of-way and tree cutting permits. Note that Table 2 does not include the budget for construction of engineering measures (road cuts according to design), slope protection (coconet, hydroseeding, stone masonry, shotcreting, or MSE wall), and drainage (culverts, river re-channelling, and cross-drains) which were already incorporated in the over-all budget for the SCTEX civil works.

#### **4.1.5 Close supervision by BCDA of its contractors**

The BCDA closely supervised the construction of the entire SCTEX including that along Roosevelt Park. BCDA had its construction engineers and various personnel on site during construction. It was their duty to ensure that the construction, including the engineering measures that would mitigate the negative environmental impacts, was according to the approved engineering design and standards. Said design already incorporated specifications for environmental mitigation.

#### **4.1.6 Close monitoring of the MMT and vigilance of the DENR-PAMB and PASu in enforcing the NIPAS law**

Condition 6.2 of the ECC for the SCTEX called for the creation of the Multipartite Monitoring Team (MMT) composed of representatives from the BCDA, DENR, LGUs, concerned NGOs/POs, affected communities, and government agencies. The MMT was tasked to oversee BCDA's compliance with the Environmental Management Plan (EMP), the ECC conditions and all applicable rules and regulations. The MMT is further divided into smaller groups called Sectoral Monitoring Teams (SMT).

The SMT closely monitored the construction of the SCTEX inside Roosevelt Park. The SMT regularly convened, held meetings, monitored the construction, and reviewed field reports. It also conducted consultations with affected communities and helped enforce the NIPAS law. In particular, the SMT monitored the noise level and noise concerns of the neighborhood near the affected area by the SCTEX construction.

Though lacking in financial and manpower compliment, the DENR, PAMB and the PASu were not deterred in enforcing the NIPAS, the ECC, the conditions in the tree cutting permit, and the MOA between BCDA and DENR-PAMB. Their dedication to duty and human concern for the environment prompted the vigilant protection of the affected area during the construction of the SCTEX.

For example, tree cutting in Roosevelt Park by the contractor was closely monitored by the DENR. Tree cutting could not proceed without the presence or approval of DENR. BCDA also monitored its contractors by way of assistance to DENR.

#### **4.1.7 Administrative and bureaucratic difficulties in coordination between BCDA and DENR/PASu that caused delays**

Administrative and bureaucratic difficulties in the coordination between BCDA and DENR/PASu caused delays. Some PAMB resolutions were not acted upon by BCDA swiftly because of administrative procedures. At times, the contractor failed to fully cooperate and failed to immediately inform the SMT of problems. Only when the PO, NGO or barangay officials complain (who were members of the PAMB) would the contractor present the problems to the SMT.

#### **4.2 What BCDA did to comply with NIPAS law and mitigate the Environmental Impact of the SCTEX to Roosevelt Park**

The following are the actions and measures that BCDA took in order to mitigate and address the environmental impacts to the affected area during the construction of the SCTEX. These were gathered from the key informant interview, answers to the questionnaire, actual ocular inspection of the affected area, and from the review of records and documents.

##### **4.2.1 Topographic Features and Natural Drainage Pattern, and Soil**

BCDA installed metal pipe culverts in order to drain water from coming from mountains within Roosevelt Park and into Pinulot River. These hydraulic structures are designed to accommodate expected water flow from upstream.

The landscape of Roosevelt Park is permanently disfigured by embankments and deep cuts, and fills due to construction. In order to mitigate this, BCDA cut roads according to design and restored disfiguration in the final stages of construction. Some of these restorations include the creation of natural looking slopes along the embankment using the bio-degradable chemically treated coco-nets, hydroseeding works and shotcreting.

##### **4.2.2 Water Quality, Air Quality, Noise Level**

BCDA set up a total of 7 air and noise monitoring stations, and 12 water monitoring stations along the entire SCTEX of which one (1) water monitoring station was placed inside Roosevelt Park. These stations are mobile and could readily relocate from point to another along the road alignment.

Residents near Roosevelt Park complained against noise coming from the trucks and equipment that pass through their neighborhood going to Roosevelt Park. This is because construction continues even into the evening hours thereby disturbing the peace that the communities have been accustomed to. On such occasions, the contractor, BCDA, and the MMT held dialogues with the affected neighborhood and agreed upon the hours of construction and advance notice to affected neighborhood. The contractor agreed limit construction during the day until 9 p.m. only in order not disturb the sleep of residents.

Nevertheless, no complaints inside Roosevelt Park have been received regarding noise since there are no affected residential communities inside. The complaints on noise disturbance came from neighborhoods near or leading to Roosevelt Park.

So far, there have been no reports or complaints on water contamination and air pollution in Roosevelt Park. The EIA itself also mentioned that for air pollution, only particulates need to be monitored during construction. Dust levels at the site should be expected to be above allowable limits while construction proceeds (Woodward-Clyde, September 1999: 5-13).

It should be noted that PAMB and the DENR-PASu closely monitored the construction and the complaints coming from affected or nearby neighborhoods. In addition, BCDA submits a monthly environmental monitoring report to the DENR for its evaluation.

Dust from construction was the main air pollutant. In order to mitigate dust, the SCTEX contractors watered the road under construction using truck sprinklers or water trucks.

##### **4.2.3 Flora, Fauna and Wildlife**

SCTEX destroyed vegetation inside Roosevelt Park because trees and plants had to be cleared in order to give way to the road alignment. It is worthy to note however that the original road alignment would have brought about the cutting of about 1,514 trees. Upon the instance of

PAMB and DENR, the toll road inside Roosevelt Park was re-aligned in order to lessen the number of cut trees to 1,160.

DENR-PAMB through a MOA, and DENR through road right-of-way permit required BCDA to replant 20 hectares of Roosevelt Park with 50,000 seedlings. In addition, BCDA was required to replace every tree that has been cut with 50 seedlings which seedlings were turned over to the DENR-PENRO. Finally, tree cutting in Roosevelt Park was allowed only in the presence of a DENR representative.

#### 4.2.4 Affected Communities, Employment and Livelihood Opportunities

No communities inside Roosevelt Park were affected because none existed along the affected area. However, there were 20 farmers who planted trees inside the Roosevelt Park who were affected. These farmers did not live inside Roosevelt Park but were somehow able to plant trees and build small structures therein. In order to compensate them, BCDA gave each an average of P60,000.00 for the trees and improvements that they allegedly owned and which had to be cleared in order to give way to the toll road.

Table 3 below shows the direct impacts, the suggested mitigating measures, and the actions that BCDA undertook as discussed above. The fourth column in the table shows the applicable provision in NIPAS law that corresponds to the mitigation of impacts.

Table 3. BCDA actions to comply with NIPAS and mitigate environmental impact of the SCTEX

Potential Direct Environmental Impact	Mitigating Measures	BCDA Actions	Applicable provisions in NIPAS law
1. Increased sediment in streams affected by erosion at construction sites and fresh road cuts, fills and waste dumps.	Protect susceptible surfaces with mulch or fabric, and plant erodible surfaces as soon as possible	Temporary sand bagging to prevent erosion  Riprapping  Shotcreting for slope protection  engaged environmental monitoring contractor that set up a total of 7 air/noise monitoring stations and 12 water monitoring stations; 1 water monitoring station was placed inside Roosevelt Park  engineering measures	Section 20 (e) (g)(h)
2. local dust and noise	<ul style="list-style-type: none"> <li>▪ Periodically water down or lightly oil temporary roads</li> <li>▪ Install and maintain mufflers on equipment</li> </ul>	monitoring; BCDA calls attention of contractor; reacts on info from residents/noise still within limits; dialogue with affected neighborhood  watering using water trucks  construction was allowed only until 9 p.m.  contractors installed “silencers” or mufflers on vehicles and equipment	Section 20 (c) - for dust
3. air and noise pollution from vehicle operation, in populated areas traversed by the highway, notably metropolitan areas or densely settled rural areas	<ul style="list-style-type: none"> <li>▪ Include physical barriers to noise in plans</li> <li>▪ Require adherence to engine maintenance schedules and standards to reduce air pollution</li> <li>▪ Enhance public transportation and traffic management capability</li> </ul>	monitoring; BCDA calls attention of contractor; reacts on info from residents/noise still within limits; dialogue with affected neighborhood  not felt because no populated areas inside Roosevelt Park  proper maintenance of heavy equipment	Section 20 (c) - for dust

<p>4. landscape disfiguration by embankments and deep cuts, fills and quarries</p>	<ul style="list-style-type: none"> <li>▪ Use an architectural design to “blend” with the landscape</li> <li>▪ Replant disfigured surfaces</li> </ul>	<p>Soil removed used for embankment</p> <p>Compacted soil using graders</p> <p>Engineering measures; road cuts according to design</p> <p>Slope protection measures: coconet, hydroseeding, shotcreting, drainage structures</p>	<p>Section 20 (d) (e) (g)</p>
<p>5. landslides, slumps, slips and other mass movements in road cuts</p>	<ul style="list-style-type: none"> <li>▪ Provide drainage works as needed to reduce risk, according to prior surveys</li> <li>▪ Align route to avoid inherently unstable areas</li> <li>▪ Stabilize road cuts with structures (concrete walls, dry wall masonry, gabions, etc.)</li> </ul>	<p>No observable landslides and mass movements</p> <p>Temporary sand bagging to prevent erosion</p> <p>Engineering measures; road cuts according to design</p> <p>Slope protection measures: coconet, hydroseeding, and shotcreting</p> <p>Drainage/culverts installed; river re-channelling (Pinulot River); cross-drains and box culvert structures</p>	<p>Section 20 (e) (g)</p>
<p>6. alteration of overland drainage and subsoil drainage (where road cuts intercept perched water tables, springs, etc.)</p>	<p>Installation of adequate drainage works</p>	<p>Riprapping along riverbank (Pinulot river) to protect soil</p> <p>Periodic cleaning and inspection of waterway and rainwater</p> <p>Culvert installed; to drain water from mountain to Pinulot River</p> <p>Culverts constructed along natural drainage</p>	<p>Section 20 (e) (g)</p>
<p>7. destruction of vegetation and wildlife in the right-of-way occupied by the highway</p>	<p>Realignment where possible to detour exceptional areas, identified by prior surveys</p>	<p>Area already logged over; Not much wildlife along road right of way</p> <p>SCTEX did not affect much wildlife because Roosevelt Park is very large and affected area is only a small portion</p> <p>SCTEX was re-aligned for least damage; avoided about 1,524 trees; only 1,160 trees affected under new alignment (20% big trees - 90 cms in circumference)</p> <p>Seedling replacement - gave DENR-PENRO 50 (mahogany) seedlings for every tree cut</p>	<p>Section 20 (a) (c) (d)</p>
<p>8. destruction or damage of terrestrial wildlife habitats, biological resources or ecosystems that should be preserved</p>	<p>plan national transportation route alignment according to location of fragile, unique, etc., areas</p>	<p>Minimal cut; not observable anymore; SCTEX did not affect much wildlife because Roosevelt Park is very large and affected area is only a small portion</p> <p>Not much habitats destroyed; animals did not live along the area affected by the SCTEX because the area was already disturbed even before the SCTEX</p> <p>Seedling replacement - gave DENR-PENRO 50 (mahogany) seedlings for every tree cut</p>	<p>Section 20 (a) (c) (d)</p>

<p>9. - dislocation and compulsory resettlement of people living on the right-of-way - near cities and in rich farming regions, many people can be affected</p>	<p>locally unprecedented mechanisms and procedures may be required to arrive at equitable and adequate compensation, and a companion effort to develop the capacity may be required</p>	<p>There were no person living along the right of way  20 persons claiming to be farmers/tillers were compensated for the trees they planted and small structures; no settlement affected</p>	
---	---	---	--

The first column of the Table 3 above enumerates the most probable negative environmental impact of the SCTEX to the affected area. Except for impact number 3 above, BCDA was able to undertake the identified mitigating measures under the second column, and is therefore compliant with the requirements of the applicable NIPAS provisions under the fourth column. Overall, BCDA was able to comply with the requirements of the NIPAS law.

### 4.3 Other Enforcement Instruments

The following are the other enforcement instruments that afforded protection to the affected area in Roosevelt Park during the construction of the SCTEX. They are instrumental because they were able to address certain areas in the protection of Roosevelt Park that the NIPAS law was not able to address with a specific provision of law.

#### 4.3.1 PAMB and the MOA

In protecting Roosevelt Park from the negative environmental impacts, NIPAS law amply provides measures not through direct provisions of law, but through the creation of a regulatory and oversight body as PAMB. Note that PAMB is creation under Section 11 of the NIPAS law.

PAMB and DENR have been vigilant and active in protecting Roosevelt Park. A clear indication of this is that PAMB and DENR were able to cause the change of the original road alignment in order to affect lesser number of trees because many of the direct negative impacts on natural systems can be avoided by judicious route selection. Re-alignment was achieved even though the original road alignment over Roosevelt Park had already been carefully planned -- the SCTEX having been in the planning stage for several years before the commencement of actual construction or civil works and after a comprehensive toll road engineering design had been scrutinized and approved by the NEDA and the Toll Regulatory Board (TRB).

Figure 1 below shows the original SCTEX alignment (in yellow) that was designed by BCDA's engineering consultants and had been approved by the NEDA and TRB. However, because of their concern for the environment, PAMB and DENR proposed alternative alignments (in pink and red, respectively). In the end, it was the DENR refined alignment (in blue-green) that prevailed; thus limiting the number of trees cut to 1,160 trees only. The DENR refined alignment is the final alignment.

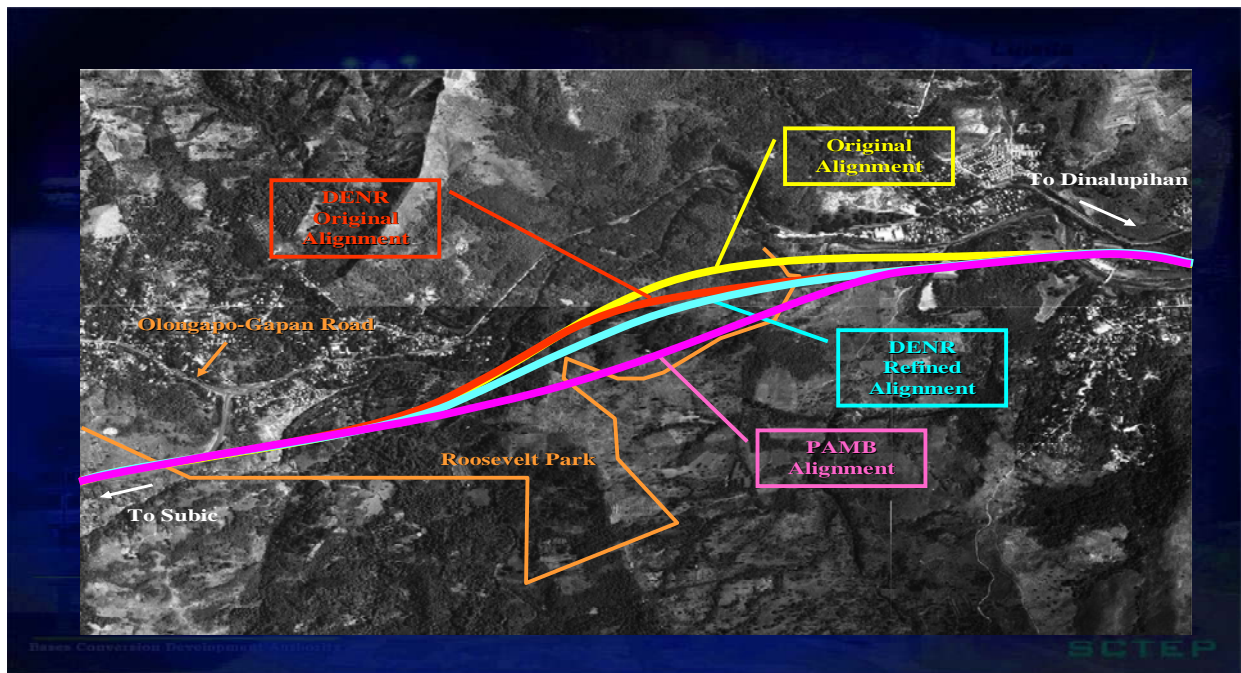


Figure 1. SCTEX Original, Alternative and Final Alignment

DENR-PAMB, through a MOA with BCDA, imposed: 1) the replanting of 20 hectares of Roosevelt Park where only 10.92 hectares were actually affected by the road alignment; 2) the rehabilitation of the Nature Center Club House/Pavilion inside Roosevelt Park; 3) the replacement every tree that was cut with 50 seedlings; and 4) the construction of pedestrian overpass. Entrance fees on construction equipment entering Roosevelt Park were also collected for the IPAF of Roosevelt Park.

The MOA, being a contract, is strictly not regulation. The MOA is a result of negotiations and compromise between the DENR-PAMB and BCDA. However, it achieves a similar purpose as that of law or regulation because it binds BCDA to comply with certain obligations.

It should be noted that the key informants (some were BCDA officials and PAMB members) were in disagreement as to the effectiveness of the MOA and BCDA's compliance with the NIPAS law. For some PAMB members, the MOA was ineffective because they alleged that BCDA failed to keep its commitments such:

1. Reforestation of 20 hectares of Roosevelt Park; and
2. Construction of a pedestrian overpass.

On the other hand, BCDA countered that its failure to reforest 20 hectares of Roosevelt Park was due mainly to a Commission on Audit (COA) observation that the reforestation might be disallowed in audit because COA deemed that the seedling replacements (50 seedlings for every tree cut) were the ones that should be used for reforestation. In addition, BCDA deemed it not prudent to construct the single P34 million pedestrian overpass because it was too costly.

Note that BCDA's non-compliance actually relates to its obligations under the MOA, not with the requirements of the NIPAS law. Overall, the key informants were in agreement that BCDA was able to provide the infrastructure and engineering measures that mitigated the negative environmental impact of the SCTEX. These infrastructure and engineering measures are in the form of road cuts according to design; slope protection like coconet, hydroseeding, and shotcreting; drainage like culverts and cross-drains; and river re-channelling.

#### **4.3.2 Environmental Compliance Certificate (ECC)**

Protection of the affected area in Roosevelt Park was also afforded through the ECC. Again, the ECC is a requirement under Section 12 of the NIPAS law.

In accordance with Section 12, the DENR on 5 January 2005 issued an ECC in favor of BCDA for the entire SCTEX. This ECC required BCDA to undertake an information, education and communication program for those affected. It required the creation of the MMT to monitor compliance with ECC. It created the Environmental Guarantee Fund (for rehabilitation of affected areas) and Environmental Monitoring Fund. It required submission of Construction Management Plan (to address traffic congestion and reduce accidents/hazards), Environmental Management Plan & Monitoring Program. It required BCDA to first secure a tree cutting permit from the DENR and provided for other mitigating measures such as: 1) regular sprinkling of water to reduce suspended particles; 2) measures to reduce soil erosion through silt traps or slope protection; and 3) drainage structures such as ditches, culverts and pipe drains and disposal sites of garbage and materials.

Pursuant to the ECC, a MMT was created and became active in monitoring compliance with the ECC conditions. It worked in close coordination with the BCDA and the contractors allowing coordination, feedback and response to concerns and problems that came along.

The conditions under the ECC were mandatory and non-negotiable. It employed a strict liability principle in that upon BCDA's failure to comply, no SCTEX could be constructed; or that BCDA's officers could be held criminally and administratively liable. It leaves BCDA no room for non-compliance.

#### **4.3.3 Road right-of-way and tree cutting permits**

Road right-of-way and tree cutting permits, issued by the DENR on September 2005 and December 2005 respectively, further imposed upon BCDA an annual a rental of P500/hectare affected by the road right of way. The permits specified the trees that may be cut according to kind, number and volume; and allowed the cutting of only 1,160 trees. Like the MOA, they required BCDA to replace every tree that was cut with 50 seedlings for a total of 47,260 seedlings (3 feet or taller). They further required that cutting could only be conducted in the presence of DENR personnel and likewise imposed the reforestation of 20 hectares of Roosevelt Park.

### **5. CONCLUSION**

The following factors affected the enforcement of NIPAS law during the construction of the SCTEX:

1. clear understanding by BCDA and PAMB members of the NIPAS law and limits in authority of the PAMB;
2. lack of personnel of the office of the PASu;
3. DENR-PAMB's limited financial resources or budget allocation for Roosevelt Park;
4. BCDA's financial resources or budget allocation to comply with NIPAS law, ECC and the MOA;
5. close supervision by BCDA of its contractors;
6. close monitoring of the MMT and vigilance of the DENR-PAMB and PASu in enforcing the NIPAS law; and
7. administrative and bureaucratic difficulties in coordination between BCDA and DENR/PASu that caused delays.

In order to mitigate and address the environmental impacts to the affected area during the construction of the SCTEX, BCDA installed metal pipe culverts, cut roads according to design

and restored disfiguration in the final stages of construction include the creation of natural looking slopes along the embankment, set up one (1) water monitoring station inside Roosevelt Park, held dialogues neighborhood affected by noise from construction, submitted monthly environmental monitoring reports to the DENR, using water trucks to address air particulates, re-aligned the toll road, replanted 20 hectares of Roosevelt Park with 50,000 seedlings, replaced every cut tree with 50 seedlings, and compensated affected farmers.

The other enforcement instruments that afforded protection to the affected area in Roosevelt Park during the construction of the SCTEX are the PAMB, MOA, ECC, road right-of-way and tree cutting permits.

The NIPAS law could not specifically address each and every negative environmental impact that a project like the SCTEX may bring. The NIPAS law provisions on the creation of PAMB and requirement of an ECC make up for the details that the NIPAS law could not possibly provide given all the concerns and specifics that are attendant to a huge infrastructure project like the SCTEX.

The PAMB, MMT, MOA, ECC and right-of-way and tree cutting permits have been effective enforcement tools for the protection of Roosevelt Park. They have become force multipliers, able to specify and potentially address the minute but important details of law enforcement. They could overcome or minimize the negative effects of factors that hinder law enforcement. Of these factors, lack of resources and obstacles in bureaucratic coordination are the primary culprits.

Like many government agencies, the PASu need manpower flexibility in order to adapt to the changing and additional demands of work. The BCDA on the other hand, being sufficient in financial resources, may help build the capacity and resources of other government instrumentalities that are tasked with environmental protection like the DENR-PAMB and the Municipality of Dinalupihan.

## REFERENCES

- Asian Development Bank (2000) Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Democratic Socialist Republic of Sri Lanka for the Protected Area Management and Wildlife Conservation Project.
- Calanog, L & Calderon, A (2003) Participation of Protected Area Management Board (PAMB) in Protected Area Management in the Philippines, Building on Lessons from the Field, Protected Area Management Experience in Southeast Asia, **Proceedings of the IUCN-World Commission on Protected Areas Third Southeast Asia Regional Meeting**.
- DENR Administrative Order No. 25-92, NIPAS Implementing Rules and Regulations Environmental Compliance Certificate, 9910-163-208 (5 January 2003).
- URS Greiner Woodward-Clyde (September 1999) Environmental Impact Assessment Subic-Clark-Tarlac Tollway Project.
- Fletcher, G. (1996) **Basic Concepts of Legal Thought**, Oxford University Press, NY.
- Heyes, A, ed. (2001) **The Law and Economics of the Environment**, Edward Elgar Publishing Limited, U.K.
- Memorandum of Agreement between the DENR through Roosevelt Protected Landscape - Protected Area Management Board (11 October 2005).
- Ocon, G. (2000) Assessment of the Enforcement of Environmental Compliance Certificate of Selected Heavy Industrial Firms in Limay, Bataan, Master of Arts in Urban and Regional Planning, University of the Philippines, School of Urban and Regional Planning. Quezon City.



Republic Act No. 7586 (An Act Providing for the Establishment and Management of National Integrated Protected Areas System, Defining its Scope and Coverage, and for other Purposes).

Road Right of Way Permit No. 2005-05 (September 14, 2005).

Roosevelt Park Development and Management Plan (2006-2010), DENR-PENRO, Bataan.

Tabaranza, B, et al. (2003), Integrating Forest Conservation with Local Governance. Building on Lessons from the Field, Protected Area Management Experience in Southeast Asia, **Proceedings of the IUCN-World Commission on Protected Areas Third Southeast Asia Regional Meeting**, 1-5 April 2003.