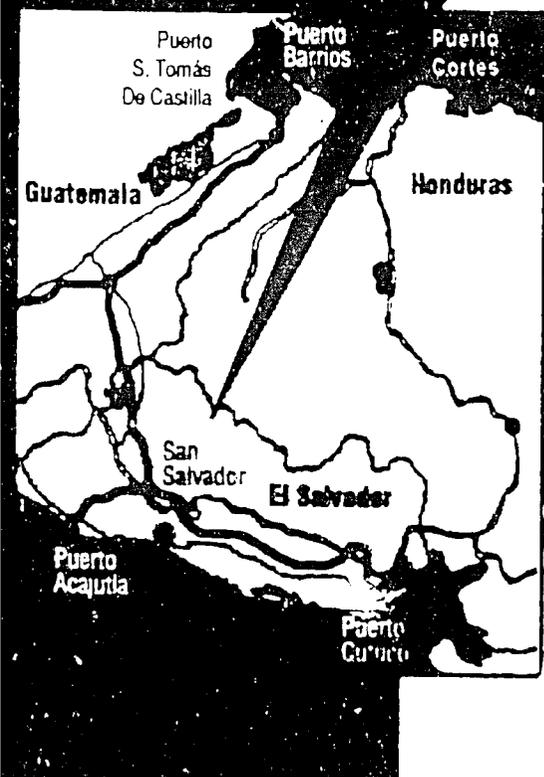


GOES/USAID
Mission to El Salvador
Intermodal
Transportation Study

PN-ABX-458



Final Report
TASK 8
REGULATORY AND
POLICY ANALYSIS
prepared by
Frederic R. Harris, Inc.
in association with
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and
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San Salvador July 5, 1995

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San Salvador, El Salvador

Ref.: Intermodal Transportation Study
Contract No. 519-0394-C-00-4112-00
Final Report, Task 8 "Regulatory and Policy Analysis"

Dear Mr. Girón:

In compliance with section C.3.6 of above referenced contract enclosed herewith are 10 (ten) copies, in English, of the Final Report of Task 8 "Regulatory and Policy Analysis". We are sorry about the delay due to printing problems.

We are calling this "Final Report" rather than "Final In-Depth Report" because we are now incorporating in one single volume phases 1 (Assessment) and 2 (Analysis) of the Study.

Sincerely yours,

A handwritten signature in cursive script that reads "Cosío".

José H. Cosío, P.E.
Team Leader

P_N-ABX-458

TASK 8

REGULATORY AND POLICY ANALYSIS

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GLOSSARY OF TERMS

AIES	International Airport of El Salvador
AME	Machinery & Equipment Administration
C.A.	Central America
CEPA	Autonomous Executive Port Commission
DGC	General Directorate of Roads
DGTT	General Directorate of Ground Transportation
FEFE	Economic Stabilization and Development Fund
FENADESAL	National Rail of El Salvador
GAES	Economic and Social Advisory Group
GOES	Government of El Salvador
HDM III	Highway Maintenance Model of the World Bank
MEF	Special Financial Margin
MFS	Subsidy Financing Margin
MOP	Ministry of Public Works
PSO	Public Service Obligation
SIAMV	Road Maintenance Management Information System
TRANUS	Transportation Planning Model

This task summarizes and analyzes:

- The progress GOES has achieved in the development of transport sector policies regarding system optimization, public sector modernization, infrastructure, services and fiscal and financial policies.
- Constraints which remain to be removed to achieve full sector development.
- A proposal to add to GOES transport sector strategic objectives and policies.
- Regulatory and policy constraints to the development of each subsector of the transport sector and proposals of alternative solutions for regulatory and institutional change to relieve these constraints. Policies which do not need changes are not mentioned.
- Analysis of transport sector fiscal policies and proposed changes by subsector.

The constraints discussed here are concerned with:

- Institutional, regulatory and policy issues to be overcome in order to achieve GOES development, modernization and privatization objectives.
- Lack of the appropriate regulatory framework and incentives for effective transportation operations.
- Fiscal and financial policies with inadequate pricing and incentive mechanisms.

After the review of current policy constraints and proposed strategies, institutional and regulatory constraints and proposed solutions are summarized by subsector. Then, fiscal and financial policy constraints and related recommendations are discussed separately. Analysis in further detail may be found in the preceding Task.

8.1 GOES Progress in the Development of Sector Policies

In this section, the Consultant summarizes its understanding of the considerable GOES efforts to improve transport sector policies and programs in the context of its economic policy of development, opening and liberalization.

8.1.1 The Optimization of the Transport System

The Consultant interprets GOES general transport system optimization objectives as being to:

GOES privatization policy, as applied to the operation and maintenance of several transport modes is in different phases of definition for highway maintenance and Acajutla port operations.

8.1.3 Infrastructure

The GOES is carrying out an extensive rehabilitation of the intermodal network, especially of the main highway network and the Port of Acajutla, and is completing the equivalent program for the International Airport's runway.

The country's infrastructure policy also include capacity expansion, including specific highway links. the installation of a gantry crane at Acajutla, the study of a container terminal at Cutuco and the expansion of the International Airport's passenger and cargo terminals.

8.1.4 Improvement of Transport Services

In addition to improvements in service efficiency due to infrastructure investments, GOES is currently carrying out the following transport service improvement policies:

- Special financing to renew the passenger and cargo fleet.
- Study to improve legislation, regulation and public transit tariff structure.

8.1.5 Fiscal Policies

GOES' own highway funding sources available to balance the sector budget have been changed. Tolls have been replaced by higher vehicle registration fees. Reductions in duties are being made up by an increase in the value added tax and other special vehicle taxes are being studied. In addition, GOES is reviewing the possibility of eliminating public transit's fuel subsidy.

8.2 **Existing Constraints to Development**

Despite these efforts after the peace accords, various transport sector deficiencies persist. After consulting with GOES transport professionals, the Consultant summarizes its assessment of remaining constraints to sector development.

8.2.1 Sector Optimization

Some policy constraints to system optimization have been identified regarding cost-effectiveness, equity and environmental conservation.

The system's cost-efficiency still has room for improvement in that:

- More resources assigned to infrastructure is for rehabilitation than maintenance.
- Ground transport subsidies do not have their desired impacts.

Regarding equity, low income segments have lost in higher transport costs for wage goods and in the quality of public transit services through:

- Deterioration of the intermodal network, leading to higher transport costs, contributing to the price of wage goods.
- Also, public transit subsidy administrative problems have apparently reduced the benefit lower passenger fares could bring.

The existing system produces excessive air pollution specifically as a result of:

- Excessive fuel consumption due to old, untuned vehicles not required to meet environmental regulations.
- Prevalence of private cars, which should increase in the future, leading to greater total fuel consumption.
- Marine pollution.

8.2.2 Public Sector Modernization

Despite the modernization program's priority for transportation, it is still in its inception. MOP modernization studies and training are only scheduled to begin soon. Reduction-in-staff and privatization programs are proceeding only gradually.

8.2.3 Infrastructure

Infrastructure policies remain to be completed as follows:

- There is a lack of current plans to rehabilitate or maintain currently deteriorated secondary and rural roads, and to rehabilitate the Cutuco pier.

8.2.4 Transportation Services

- Transport services lack quality, efficiency and safety due to failure to renew fleet, postponed infrastructure maintenance and inadequate regulation.



- The financing available for passenger and cargo fleet renewal is insufficiently used.

8.2.5 Inadequate Fiscal and Financial Policies

- There are several fiscal and financial issues which remain to be defined and solved, regarding resource funding and efficiency for both infrastructure and services:
- A clear long-term policy has yet to be defined to efficiently use investment resources by assigning funds to the continuous maintenance of the intermodal network, thus reducing future rehabilitation needs.
- Although fiscal resources collected from the sector are similar to current needs, insufficient funds are assigned to it, especially to highway maintenance, but also true regarding the railroad and ports. In many cases, this leads to unsure financing.
- Several subsidies are inefficient and do not bring the expected results.
- There is a lack of capability to adequately develop and manage tariff policies, giving the incentives needed to provide the services user require, especially with regard to public passenger services.

8.3 **Proposed Sector Strategy**

The Consultant proposes GOES adopt the following sector strategies, organized by policies for transport system optimization, public sector modernization, infrastructure investments, improved transport services and fiscal and financial policies.

8.3.1 System Optimization

The Consultant proposes GOES set the following strategic optimization objectives regarding cost-effectiveness, equity and environmental impact:

- The efficient use of resources needed for maintenance, rehabilitation and expansion of the intermodal network.
- Provide incentives for public transportation to reduce the total cost of transport and pollution.
- Provide low income passengers safe, economical and quality transport services.

- Reduce fuel consumption and pollution through improved public transportation, expanded infrastructure capacity, and by setting and enforcing vehicle import and inspection regulations.
- Observe environmental mitigation standards in design and construction.

8.3.2 Public Sector Modernization

Rapidly implement public sector modernization by:

- Adapting MOP and CEPA functions to the modern concept of the public sector, adjusting organization, number and technical capacity of personnel.
- Modernize and restructure the management, coordination and planning of the transport sector.
- Privatizing services which are basically operational such as highway maintenance, port operations and airport cargo services, leading to competitive and efficient services.
- Decentralizing public sector responsibilities for highway maintenance and port operations.
- Establishing policies and regulations adequate for this new institutional framework, detailed in the next section.

8.3.3 Infrastructure Investments

In addition to the intermodal rehabilitation and expansion programs underway:

- Give priority to the maintenance of the existing intermodal network.
- Rehabilitate and/or maintain deteriorated infrastructure which lack plans, including secondary and rural roads, and the Cutuco pier.
- Implement the San Salvador bypass program.
- Study the development of the northern region and the East-West Northern Highway.
- Establish specialized port container services.
- Expand port capacity for bulks.

- Support the development of the East with the required port infrastructure.
- Introduce improved air cargo infrastructure management systems.
- Close rail services unless certain necessary conditions for its rehabilitation is met.

8.3.4 Improvement of Transportation Services

Undertake policies which provide incentives for the preference of public transit through improved quality, efficiency and safety of transport services such as:

- Incentives to renew the cargo and passenger (public transit) fleet.
- Priority for infrastructure maintenance for all transport modes.
- Establish and control quality and performance standards.
- Highway safety and environmental control programs, including driver education, vehicle inspection and highway improvements.
- Improve port operations and provide productivity incentives.

With these policies, current and future private transport demand can be reduced, and thus postpone or reduce the need to expand highway capacity.

8.3.5 Fiscal and Financial Policies

There is a need to define the following fiscal and financial strategies regard cost and efficiency of both infrastructure and service resources.

- Assign the resources needed for intermodal network maintenance, thus saving future rehabilitation needs.
- Create mechanisms which guarantee these budget allocations. (*special highway maintenance account*).
- Eliminate fuel subsidies.
- Maintain a tariff policy that is equitable for operators and users, up to (and not out of) date, and competitive with alternate services.

Study the possibility of reintroducing tolls, letting highway maintenance concessions, and improvement assessment taxes for urban bypasses.

8.4 Summary of Institutional and Regulatory Constraints and Proposals

The institutional and regulatory constraints to transportation development, modernization and privatization are summarized in table form for each area, accompanied by further text to clarify key issues. The areas discussed are:

- Issues of transport sector coordination, management and planning, key to the success of effective policy and investment decisions leading to sector efficiency. (Discussed in Task 1 - Transport Sector Management and Coordination)
- Interurban ground transportation, where significant institutional and policy decisions need to be taken to improve service to users. (Summarized from Task 7 - Interurban Transportation)
- Road construction and maintenance, where the greater part of sector resources will necessarily go and where the GOES faces major institutional constraints to their efficient use. (Summarized from Task 3 - Highway Studies)
- Railroad management and operations, highly relevant to the future feasibility of its operations. (See Task 4 - Rail Studies)
- Port operations, the area in which significant privatization decisions remain to be taken. (See Task 5 - Port Studies)
- Airport operations, where decisions are needed to promote the growth in air cargo transport. (see Task 6 - Air Transport Studies)

8.4.1 Transport Sector Management and Coordination

The Consultant carried out a preliminary analysis of transport sector management and coordination requirements and identified, among others, the following institutional and corresponding regulatory constraints and proposals to solve them.

TABLE 8.4.1
Institutional and Regulatory Constraints and Proposals
Transport Sector Management and Coordination

CONSTRAINT	ANALYSIS	POLICIES AND PROPOSALS
MOP is in charge of sector management, coordinating 3 specialized Vice-ministries and CEPA.	MOP lacks adequate conditions to coordinate these institutions, as it has received added responsibilities without change to its central structure nor definition of its single strategic objective.	<i>Modernization</i> Study MOP reform and merge vice-ministries to create a new MOP.
Coordination among sector institutions is informal and inadequate.	There is insufficient timely communication among institutions as well as with the private sector.	Create a consultative Transport Committee to support the Minister in taking important decisions.
Sector planning capacity is limited and dispersed.	Partial planning is carried out by VMOP, DGC and CEPA. No unit has a sector planning function.	Create the General Planning Directorate - DGP of MOP to develop transport sector strategies, plans, programs and policies.
The VMT was created without a planning capability.	VMT lacks transport service development planning capacity, including national ground, marine and air transport policies.	Create a VMT planning unit to be subsequently integrated into DGP in the new MOP.
The VMT lacks the structure and resources to fulfill its functions.	VMT has limited technical capacity and there is a lack of clarity and independence in granting concessions.	Reorganize and technify VMT functions, later to be integrated into the new MOP. Establish an independent regulatory committee within VMT.

Source: Frederic R. Harris, Inc. Task 1.

8.4.2 Interurban Transport Subsector

It may be in the area of interurban ground transportation where the most significant regulatory and institutional decisions need to be taken to improve service to users.

Due to past conflict and inadequate policies, the average bus is almost 20 years old.

The Consultant recommends, therefore, that:

- ✓ Additional funding be provided for the existing fleet renewal program.

The role of existing operator associations, AEAS and ATP, is largely to defend member interests, while they are insufficiently developed to regulate themselves and promoting service quality.

In order to reduce the need for DGTT bureaucracy, they should in cooperation with DGTT, gradually broaden their role. Also, bus terminals are entirely inadequate in terms of demand and level of service. Together, they can.

- ✓ Set service standards and self-regulatory roles.
- ✓ Plan bus terminals and seek their concessions.

Public transit lacks a clear regulatory framework. Regulations from 1956 are outdated and disorganized, with numerous updates, much of which is not currently covered in the proposed transit law under consideration. Therefore:

- ✓ Public transit regulations should be updated and/or organized.

Existing regulations provide for the granting of public transit concessions on a competitive basis. These are not generally followed, however. Also, other public transit regulatory and control procedures are cumbersome.

Therefore, the Consultant proposes:

- ✓ To establish an independent committee within VMT to grant concessions on a technical, competitive basis.
- ✓ Simplify other DGTT regulatory procedures through self-regulation and reporting systems, as discussed in Task 7.

These constraints and proposals are summarized in Table 8.4.2.

TABLE 8.4.2
Institutional and Regulatory Constraints and Proposals
Interurban Transport Subsector

CONSTRAINT	ANALYSIS	POLICIES AND PROPOSALS
Delayed investment in public transit fleet and bus terminals	Due to conflict and inappropriate policies, average bus is almost 20 years old. Bus terminals are inadequate.	<i>Financing</i> Additional funding program for fleet renewal and fare incentives. Need for bus terminal concession plan.
Barriers to efficient public transit companies	Prevalence of individual ownership due to failure of 70's co-operative policy. Concessions maintained regardless of performance.	<i>Service Quality</i> DGTT develop performance-based concession policies. Reconsider preference for individual firms, while avoiding monopolies.
Insufficient development of private operator associations.	The associations are dedicated to the defense of their members, they do not have roles in self-regulation of service quality and development of sector.	<i>Private Sector Development</i> Support the institutional development of these associations so that, jointly with the DGTT, they may: <ul style="list-style-type: none"> • Set and self-regulate service standards. • Plan bus terminals.
Lack of clear legal and regulatory framework	Public transit regulations from 1956 with numerous updates, with adequate coverage, but outdated and disorganized.	<i>Regulation</i> Organize and/or update public transit regulations.
Lack of national ground transport policy.	The objectives and strategies have not been clearly defined nor have the policies needed to achieve them.	Define a subsector policy, including functions by type of public service.
Implementation of public transit regulations.	Existing regulations not followed in granting concessions. Procedures used too bureaucratic and without technical basis. Some operate without permits.	Establish independent committee within VMT to grant concessions on technical, competitive basis. Simplify procedures.
Delayed investment in freight fleet and terminals.	Salvadorean fleet inadequate and not competitive in C.A. No plans for freight terminals to promote containerization, etc.	<i>Financing</i> Renew fleet with expansion of existing financing. Work with freight associations to evaluate/promote terminal needs.
Lack of highway safety / security	Theft and accidents are prevalent.	<i>Highway Safety</i> Technical highway safety standards. stricter truck licensing, patrols, accident records, truck radios.

Source: Frederic R. Harris, Inc. Task 7.

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Cargo transportation is largely unregulated. However, there are several issues which should concern the GOES. The Salvadorean truck fleet is inadequate for the country's needs and not as competitive as those of Guatemala and Costa Rica. Also, there are currently no plans for the establishment of freight terminals at appropriate locations to promote containerization and greater transport efficiency. Therefore, the Consultant proposes that:

- ✓ Existing lines of financing be used more intensively to
 - Renew the truck fleet.
 - Finance shippers and/or their associations to evaluate and promote freight terminal needs.

Truck accidents and assaults are frequent occurrences. Therefore, the following safety and security measures are proposed:

- ✓ Stricter truck licensing requirements, including elements of self-regulation.
- ✓ Maintenance of accident records and their use in planning prevention.
- ✓ Prevent assaults by greater patrolling of highways and the promotion of truck radios through freight associations.

Fiscal policy issues are discussed in the following section of this Task.

8.4.3 Road Subsector

Many management studies have been completed over the years concerning the Ministry and Vice-Ministry of Public Works, and the General Directorate of Roads. Booz Allen completed an Institutional Evaluation of MOP in 1989. Tech International completed an Infrastructure Sector Assessment in 1990. The latest was prepared in 1994 by Coopers & Lybrand for the Ministry of Planning (GAES). After completing a broad-ranging study on the modernization of the public sector, they did an assessment and action plan for the Vice-Ministry of Public Works, as a pilot sector modernization study. This study, and others referenced here, are used as the basis of the Consultant's analysis, especially with reference to the General Directorate of Roads-DGC and the Machinery and Equipment Administration-AME.

The institutional and regulatory constraints to efficient road construction and maintenance are summarized in Table 8.4.3, discussed briefly below and in further detail in Task 3.

TABLE 8.4.3
Institutional and Regulatory Constraints and Proposals
Road Subsector

CONSTRAINT	ANALYSIS	POLICIES AND PROPOSALS
Lack of routine and periodic highway maintenance	While the SIAMV system has been designed, an implementation plan has not yet been prepared nor budgeted.	<i>Modernization: Maintenance</i> Prepare maintenance plan based upon SIAMV and this study.
Inefficient maintenance work performance	Highly centralized, not contracted. Decentralization proposed but remains complex and undefined.	Implement proposed contracting procedures. Undertake maintenance decentralization and concession studies.
Priorities for staff and network expansion over maintenance	Inadequate planning and budgeting mechanisms.	Budget based upon cost-effectiveness, not on past expenditures, prioritizing maintenance.
Excessive personnel, given work accomplished	Reduction in personnel in progress, but concentrated on more qualified contract personnel.	<i>Modernization: Reduced Personnel</i> Complete reduction, preferably of less qualified personnel and their absorption by forming microenterprises. Severance costs are higher but more cost-effective.
Insufficient qualified personnel	Low salaries, lack of career opportunities.	Improve salaries and training of qualified personnel; develop career paths.
Project cost overruns and delays.	Slow fund disbursement, lack of clearly defined procurement and control procedures.	<i>Modernization: Purchasing Macrosystems</i> Accelerate preparation of purchasing, control and disbursement of MOP and Finance Ministry norms and procedures.
Benefits of weight control not clear.	This issue, not included in this study, requires further analysis.	<i>Weight Controls</i> Carry out cost-benefit analysis, meanwhile maintaining existing system.
Weight control does not prevent excess axle loads but tends to dissuade users from exceeding limits by wide margins.	Existing system lacks adequate supervision and penalties.	If additional study warrants, improve existing weight control system and operations by contracting with private sector.

Note: SIAMV - Road Maintenance Management System.

Sources: Frederic R. Harris, Inc. Task 3; MIPLAN, Pilot Study of the Vice-Ministry of Public Works - Assessment and Action Plan.

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Despite the fact that these two agencies (DGC and AME) receive approximately half of the Vice-Ministry of Public Works' budget and about 40% of the Ministry's, they are unable to carry out the DGC mission to maintain the nearly 10,000-km road network. While the roads should be maintained to a high standard to reduce costly rehabilitation needs, almost no routine maintenance is undertaken, being largely limited to inefficiently-performed emergency patching. There does not appear to be movement towards improvement since peace was declared. This is because:

Although the DGC has developed a maintenance planning system, SIAMV, and has been successful in obtaining extensive external financing for rehabilitation, one of its commitments to some of the donors is to maintain the rehabilitated roads with counterpart funds from the GOES ordinary budget. As has occurred in the past, the GOES and many other Latin American governments have often been unable to meet similar commitments. Some governments of developing countries, however, have been able to obtain additional external funding to meet counterpart fund obligations, especially when they present a well-prepared road maintenance plan.

- ✓ As detailed in Task 3, the Consultant proposes the GOES prepare a maintenance plan based on this study and SIAMV, to privatize routine and periodic maintenance through contracts with the private sector -using small and large contractors respectively. The Consultant clearly defines the process needed to effectively privatize a major share of maintenance work.

MOP has excess personnel. The Consultant recommends:

- ✓ Reducing staff, with preference for the less skilled, and establishing microenterprises to absorb them.

Budget priorities are inappropriately higher for technical and administrative staff, and network expansion and improvement than for maintenance. The Consultant recommends:

- ✓ Establish budget priorities for maintenance based upon cost-effectiveness.

Fund disbursement is slow leading to increased costs and project delays.

- ✓ Accelerate the preparation of improved purchasing systems.

The benefits of axle weight controls are not clear. The Consultant recommends:

- ✓ Maintain the existing system but suspend additional scale program while its effectiveness is being evaluated.

Fiscal and financial issues on road maintenance and construction are discussed in the next section.

8.4.4 Rail Subsector

The key institutional and regulatory concerns regarding the rail subsector are summarized in Table 8.4.4, discussed below and in Task 4.

The Consultant has analyzed five rail service scenarios in Task 4 indicating the advantages of closure. However, in the event GOES elects to implement one of the first four, whereby a part of the existing network is rehabilitated, it should seriously consider changing FENADESAL's regulatory environment and management system.

The railroad has been owned by the GOES and administered by CEPA since 1975. This was conceived as a provisional arrangement which requires that almost all decisions be made by GOES, CEPA and FENADESAL.

Therefore, despite being a part of a highly competitive market, much more so than faced by the Port of Acajutla and the International Airport, FENADESAL does not have the freedom to:

- Develop and manage its own budgets.
- Set and negotiate freight rates.
- Establish, divest or terminate services.
- Sell property or purchase equipment.
- Contract for construction and maintenance.
- Establish work performance incentives, etc.

The Consultant believes this cannot be achieved under current administrative procedures. In the event and at the time decisions are made to retain part of the services, GOES should also decide on future FENADESAL management.

Current rail network conditions and the competitive transportation market prevent the railroad from financing its rehabilitation entirely from future revenues, thus closing the privatization option, for now. However, if justified by other economic benefits, of the several options to delegate to FENADESAL the freedom to make decisions on the above points, thus providing the needed management freedom, only one is recommended for GOES consideration:

TABLE 8.4.3
Institutional and Regulatory Constraints and Proposals
Rail Subsector (if operations are retained)

CONSTRAINT	ANALYSIS	POLICIES AND PROPOSALS
Inflexible management practices	Regulatory environment prevents appropriate management decisions	<i>Modernization. Decentralization</i> Establish a government-owned commercial company with clearly established independence on key issues, including budgets, rates, services, procurement and staff incentives
Lack of a clear legislative mandate for independent operations.	Current legislation ties CEPA's and FENADESAL's hands.	Prepare and pass legislation providing for freer management, given the competitive environment.

Source: Fredenc R. Harris, Inc. Task 4.

- Establish FENADESAL as a commercial, government - owned railway, deficitary services would be terminated unless GOES considered them essential, in which case it would give a Public Service Obligation grant for these services. Other subsidies should be justified by additional quantified social benefits the rail service brings, such as reduced traffic highway congestion and air pollution. One of the possible government owners could be CEPA, becoming a CEPA - owned commercial company-.

Therefore, in the event the GOES decides upon a rehabilitation scenario, the Consultant recommends the first option, that:

- ✓ FENADESAL become a government-owned company, possibly with CEPA participation. This would require appropriate legislation, including special adjustments of the 1995 Budget Law to allow changes to be made in the required accounting system, providing for special accounts needed for railroad management.

8.4.5 Port Subsector

The key institutional and regulatory concerns regarding the port subsector are discussed below and in Task 5.

Acajutla tariff levels and operating costs are relatively high among Central American Ports. This, along with low productivity relative to potential performance, places the port at a disadvantage, which will be felt even more in the future if changes do not take place before regional economic integration and globalization moves forward. Therefore, the consultant recommends CEPA:

- ✓ Achieve efficiencies and savings by improving operations as recommended in Task 5.
- ✓ Set gang incentives per ton handled.

The GOES has established the modernization of the public sector as a key goal, including the privatization of government operations which can typically best be performed by the private sector. After completing its first priority privatization phase, it plans to deal with port privatization in a second phase. The key constraints to port privatization appear to be:

- CEPA legislation does not provide for the concession of port services.
 - The labor union is against the approval of this law, partly due to its lack of knowledge of the concession system.
 - Some CEPA personnel are not familiar with port privatization alternatives, the impacts it could have on CEPA's organization, staff roles and thus place doubts on privatization.
- ✓ The Consultant recommends gang incentives and training programs for port workers and CEPA technical and administrative staff.

While prior studies have dealt with the privatization issue, the Consultant proposes a different approach, which has worked in other countries, including Mexico. After careful analysis of the prospects for the privatization of the Port of Acajutla, the Consultant recommends that:

- ✓ CEPA establish Acajutla as a landlord port authority, by transferring operating responsibility over to competing specialized companies.
- ✓ The port authority establish concessions, following bidding procedures specified in Task 5, for integrated services in the following areas:
 - Handling of break bulk cargo
 - Handling of dry bulks
 - Handling of containers
 - Pilot services
 - Tug and docking services.
- ✓ The port authority should concentrate on:
 - Marketing the Port's services

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- Promotion of competition among concessionaires
- Build, manage and maintain port facilities and their environment
- Provide common services
- Develop master plans
- Establish, implement and supervise operating concession regulations.

The Port of Cutuco is managed as a part of FENADESAL, as a facility to exclusively service the railroad. This limits the port's flexibility, and potential for development. Therefore, the consultant recommends that:

- ✓ GOES hand over the Port of Cutuco to CEPA for rehabilitation and possibly, at the appropriate time, create another landlord port authority.

Table 8.4.5 summarizes these constraints and proposals.

TABLE 8.4.5
Institutional and Regulatory Constraints and Proposals
Port Subsector

CONSTRAINT	ANALYSIS	POLICIES AND PROPOSALS
Acajutla's high operating costs	High costs and low productivity relative to potential performance. Lack of labor productivity incentives. Reduced labor per ton handled can be compensated by increased tonnage.	<i>Modernization: Re-engineering</i> As recommended in Task 5, efficiencies can be achieved by: <ul style="list-style-type: none"> • Improved operations • Gang incentives by ton moved.
There are constraints to privatization to be overcome	Among these constraints are: <ul style="list-style-type: none"> • The law does not provide for concessions • The Union and some CEPA staff are not in favor of privatization 	<i>Modernization: Privatization</i> The Consultant recommends: <ul style="list-style-type: none"> • Training in privatization • Approve revised legislation • Establish Acajutla as a land lord port authority • Grant competitive port operations • Negotiate with the union in advance.
Lack of maintenance of Port of Cutuco	As part of FENADESAL, it is managed to service the railroad.	GOES hand over to CEPA the Port of Cutuco for rehabilitation.
CEPA's role in the management of new Cutuco facilities has not been determined.	If a new facility is to be successful, it will need to actively compete for traffic with other ports.	<i>Modernization: Decentralization</i> The feasibility study should analyze management alternatives. Once the decision is made to add facilities at Cutuco, consider, it's establishment as a landlord port authority to more effectively promote it's development.

Source: Fredenc H. Harris, Inc. Task 5

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8.4.6 Air Transport Subsector

The key institutional and regulatory concerns regarding the air transport subsector are summarized below and discussed in Task 6.

The study indicates that delays in customs processing of imported cargo reduces the warehouse's dynamic capacity, increasing future storage requirements. The Consultant proposes simplified procedures, including:

- ✓ Computerization, control by sampling and extended work hours.

The airlines currently have limited access to AIES space for private cargo-handling facilities, possibly constraining future cargo growth. The Consultant recommends:

- ✓ Consideration to opening competition for concessions to build and operate freight facilities.

Freight rates (and passenger fares) to and from the U.S. are currently freely set based on market conditions. However, this is not necessarily so for traffic to and from other countries. Therefore, the Consultant recommends the GOES:

- ✓ Study the impact of freeing rates to other markets, and carry out negotiations to that end.

Demands upon DGTA staff have declined with reduced domestic traffic. Therefore the Consultant recommends:

- ✓ The DGTA's responsibilities and staffing requirements be reviewed.

The DGTA, a government department, directly manages Ilopongo Airport, an activity which is naturally a function of a private or government-owned Company. Since it appears to be deficitary based upon the financial data received, the Consultant recommends that:

- ✓ Ilopongo airport management be transferred to CEPA.

Ilopongo operations have been restricted to private aircraft under Decree 422 since 1987. Given current conditions and operations, the GOES may wish to examine:

- ✓ The adjustment of these restrictions.

These concerns are summarized in Table 8.4.6.

TABLE 3.4.6
Institutional and Regulatory Constraints and Proposals
Air Transport Subsector

CONSTRAINT TYPE	ANALYSIS	POLICIES AND PROPOSALS
Institutional	Delays in customs and Court of Accounts processing of imported cargo can increase storage requirements.	<i>Modernization: Re-engineering</i> Improve: <ul style="list-style-type: none"> • Computerization • Control by sampling • Extended work hours.
	Demands upon DGTA services have declined with reduced domestic traffic.	<i>Modernization: Adequate Resources</i> Responsibilities and staffing requirements should be reviewed.
	DGTA, a government department, manages Ilopango airport directly.	<i>Modernization: Decentralization</i> Transfer responsibility for Ilopango operations to CEPA.
Regulatory	Limited airline access to AIES space for private cargo facilities.	<i>Modernization: Privatization</i> Consider opening competition for concessions to build freight facilities.
	Freight rate and passenger fares to/from US set by market but not to other countries.	<i>Modernization: Deregulation</i> Study impact of freeing rates to other markets.

Source: Frederic R. Harris, Inc. Task 6.

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8.5 Fiscal and Financial Constraints and Proposals

This section describes and summarizes in table form for the sector and each subsector the key fiscal and financial constraints and related proposals and alternatives. In general, each subsector has its own constraints and no generalization related to recommendations, proposal and alternatives can be made. Thus, the following sections discuss the highway, interurban ground transport, rail, port and air transport sub-sectors.

8.5.1 Transport Sector Fiscal and Financial Policy

The sector lack's a general financial policy. Although the Finance and Coordination Ministries have GOES budgeting and investment planning functions, sector financial analysis is not undertaken as was done in this report for the highway subsector.

- ✓ The Consultant recommends attributing to MOP the function of analyzing and monitoring sector financial, fiscal and tariff policy; and proposes that the highway financial analysis be extended to the entire sector including the other transport modes.

8.5.2 Interurban Transportation Subsector

Public bus operators receive subsidies through a preferential diesel fuel price. This subsidy program is costly to the government, now limited to a maximum 2.9 million gallons of subsidized diesel fuel per month, which at current prices amount to about 200 million colones of subsidy per year. The subsidy is administered by a complex and inefficient system, costing the bus operators about 80 million colones per year in operator-appointed controllers, and is prone to irregularities and possible misuse of funds.

As it is set at this moment, the subsidy is not reaching the targeted objective population, low income households needing basic transportation, and, as noted previously, is costing the highway subsector needed funds for highway maintenance. Therefore, the consultant recommends:

- ✓ To totally eliminate subsidy in one step or gradually and adjust fares.

From a cost perspective, there are other reasons to favor newer buses, instead of the old bus fleet currently in use. But the conflict during the past decade and insufficient incentives to replace buses has led to insufficient bus replacement programs. Thus, the consultant recommends that VI 'T institute:

- ✓ Additional funding programs for fleet renewal and fare incentives.

Those programs may include more aggressive soft loans, reduced import duties for buses, as those instituted as part of the import duties reductions for capital items, and direct preferential prices of buses.

As noted, the proposed changes in subsidies and incentives for fleet renewal may require fare adjustments. However, transfer of DGTT to VMT did not include fare analysis. Fare negotiations are largely based upon association increase requests and VMT has neither the tools nor established procedures to carry out fare adjustment proposals. Therefore, the consultant recommends VMT:

- ✓ To carry out fare studies, present them to an independent committee for review and propose adjustments. Base on this study, establish a tariff policy which provides:
 - Adequate return
 - Incentives to renew the fleet and improve services.

Table 8.5.1 summarizes the highway subsector fiscal and financial constraints and related proposals previously discussed.

TABLE 8.5.1
Fiscal and Financial Constraints and Proposals
Interurban Transportation Subsector

CONSTRAINT	ANALYSIS	POLICIES AND PROPOSALS
Costly and inefficient fuel subsidy.	Costly control of public transit fuel subsidy with irregularities.	<i>Fiscal Policy:</i> Totally eliminate subsidy in one step or gradually, adjust fares using technical methods.
Deficient transit fare policy development capacity.	Transfer of DGTT to VMT did not include fare analysis. Fare negotiations largely based upon association increase requests.	<i>Modernization: Self-Regulation:</i> Carry out fare studies, independent committee review and propose adjustments. Establish technical tariff policy which provides: <ul style="list-style-type: none"> • Adequate returns. • Incentives for fleet replacement and improved service.
Lack of funds to renew fleet.	Conflict and insufficient incentives have led to insufficient bus replacement programs.	<i>Financial Policy:</i> Additional funding program for fleet renewal and fare incentives.

Source: Frederic R. Harris, Inc.

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8.5.3 Highway Subsector

The main issues concerning the highway subsector's fiscal and financial policies include the levels of subsidies provided to some of the highway users, securing funding for highway maintenance, increased subsector's costs and additional sources of funds to meet requirements.

Public passenger bus operators receive preferential diesel fuel prices, financed mainly by gasoline surcharges: the FEFE surcharge (Fondo de Fomento y Estabilización Económica in Spanish), which provides the funds for the special account Economic Growth and Stabilization Fund, and the MFS surcharge (Márgen de Financiamiento de Subsidios in Spanish), which provides for the direct transfer of funds to subsidize diesel consumption. To date, this subsidy is limited to 2.9 million gallons of diesel per month, for a maximum subsidy of approximately 200 million colones per year, administered through a complex and inefficient subsidy system (see Task 7 for a more detailed description of this subsidy system). For 1995, because of this subsidy, it is estimated all of the public buses (those directly receiving the subsidy plus those not receiving subsidy) receive an average subsidy of more than 20,000 colones per year.

While the subsidy may be justified from a social and income redistribution viewpoint, from the highway subsector's perspective, this subsidy uses needed funds without providing a clear benefit to highway users. Thus, the consultant recommends:

- ✓ Eliminate the preferential diesel price to public passenger buses or, if deemed necessary from a social viewpoint, utilize another source of funding for needy public transport users.

An additional gasoline surcharge, the MEF (Márgen Especial de Financiamiento in Spanish) provides funds for preferential fuel consumption of gasolines and diesel by the public sector and other organizations. In 1995, this surcharge generated more than 50 million colones and, if it is not changed, is expected to grow through time. These preferential fuel prices results in the highway subsector subsidizing other public sector activities and encourages the public sector to use transport fuels more than it is economically acceptable. Thus, the consultant recommends:

- ✓ Eliminate the preferential fuel prices for public sector consumption and allow each government dependency, municipalities, and other public entities to cover all the expenses of their fuel consumption.

On the other hand, the gasoline surcharges provide a steady source of funds in direct proportion with the use of the highway system and, thus, are a preferred method of financing highway maintenance costs. Based on the Consultants' analysis, the gasoline

surcharges would provide enough funds for the projected highway maintenance needs, once all of the ongoing reconstruction process is concluded.

In Task 3, the Consultant has recommended to contract out highway routine and periodic maintenance. To do so requires a predictable and steady source of funds to contract services.

But, as noted in the previous section and Task 3, because funds for highway maintenance depend on the Government's yearly budgetary process, funds are customarily not allocated based on needs, resulting in insufficient funds and, therefore, in an inadequate and more expensive highway maintenance program. To provide a predictable source of funds for highway maintenance, the Consultant recommends:

- ✓ Utilize a special account for a Highway Maintenance Fund, to be funded with fuel surcharges and its amount determined by a pre-approved formula of required funding by type of road, and managed by a special highway maintenance contract unit.

DGC may use SIAMV and other planning tools used in this study, such as HDM III and TRANUS, to develop estimates of maintenance requirements per kilometer of road. The creation of a special account to be source with fuel surcharges and its dedication to highway maintenance may require legislative approval. On the other hand, the FEFE special account already exists, is being source with a gasoline surcharge, and its dedication to highway maintenance can be redefined by an Executive Decree, thus avoiding the need for legislative approval. However, because of the political implications, particularly if preferential diesel prices for public buses are eliminated, it may be advisable to obtain legislative approval anyway.

In the next twenty years, highway subsector costs are expected to increase substantially. This is largely due to the catching up in highway reconstruction that began in the early nineties and is expected to continue throughout the decade. Most of the highway reconstruction is being done with external credits, thus considerably increasing debt service. In addition, highway expansions to accommodate growing demand will be required in the next decade, augmenting the projected highway subsector costs.

To reduce future highway subsector costs, the consultant recommends:

- ✓ Reduce sector administration and coordination costs through modernization, increasing the use of private sourcing, improving the planning and control systems, and implement flatter organizational structures.
- ✓ Reduce highway maintenance and construction costs through private contracting, as recommended in Task 3.

- ✓ Obtain more favorable lending conditions by carefully seeking low interest lenders. Mechanisms may include securing funds from friendly governments and turn-key schemes.

Based on current conditions, projected highway subsector costs exceed revenues in the next ten years due to increased costs and reduced revenues due to reduced vehicle import tariffs. Thus, in the short and medium term, there is a need for additional funds.

Currently, a variety of revenue sources are being used. There are charges to "enter" the system, such as import duties and registration fees, and charges to "use" the system, such as gasoline surcharges and taxes on spare parts. There are fixed charges and charges indexed to inflation, most notably value added taxes. Also, the use of loans is a well established source of funds in the highway subsector. However, as noted before, gasoline surcharges are being used for purposes other than highway financing and there are some funding sources that are not being employed, such as tolls, charges to indirect beneficiaries, and private participation.

To cover the need for additional funds in the short and medium term, the Consultant recommends:

- ✓ Use the gasoline surcharges to cover the Highway Maintenance Fund needs, as proposed previously.
- ✓ Study the possibility of reintroducing tolls on selected highways.
- ✓ Study possible concessions of highway maintenance and rehabilitation.
- ✓ Consider introducing special benefit fees, such as tax increment financing and special assessments to finance new construction around main cities.

The consultants consider that, on the main highways, tolls may be a feasible source of funds, particularly if highway rehabilitation and maintenance is provided by a concessionaire. Task 3 describes the main elements to consider in implementing a highway concession scheme in El Salvador. The main financial issues include the toll levels and the concession period. Tolls would need to cover all highway maintenance and operating costs. Based on the experience of other countries, basic tolls would need to be in the neighborhood of 10 to 15 colones for a typical 50 kilometer stretch of highway. The concession period would allow for at least one full maintenance cycle to happen. These and other elements would be determined through competitive bidding. Enabling legislation regulating highway concessions would need to be passed.

The consultant is proposing new highway construction around San Salvador for the next decade. For these new construction programs, special benefit fees may be a source of

revenues. Tax increment financing and special assessments are financing methods that are being successfully used in other countries. To date, these schemes have not been used in El Salvador and enabling legislation would be required.

Table 8.5.2 summarizes the highway subsector fiscal and financial constraints and related proposals previously discussed.

TABLE 8.5.2
Fiscal and Financial Constraints and Proposals
Highway Subsector

CONSTRAINT	ANALYSIS	POLICIES AND PROPOSALS
Unsecured funding for highway maintenance	Funds depend on the Government yearly budget process and highway maintenance funds are not allocated based on needs.	<i>Financial Policy:</i> Utilize a special account for a Highway Maintenance Fund, to be maintained by gasoline and diesel taxes and defined according to a pre-approved formula of required funding by type of road.
High levels of subsidies to public passenger bus operators.	Public bus operators receive preferential diesel prices through a complex and inefficient subsidy system, maintained mainly with surcharges on gasoline prices.	<i>Fiscal Policy:</i> - Eliminate subsidy or utilize another source funding for needy public transport users. - Establish a single surcharge for gasoline consumption to maintain the Special Account.
Increasing highway subsector costs.	Additional sector administration and coordination costs, and delayed highway reconstruction is increasing debt service costs.	<i>Modernization:</i> <i>Re-engineering and Privatization</i> - Reduce sector administration and coordination costs through modernization. - Reduce highway maintenance and construction costs through private contracting.
Need of additional funding in the short and medium terms.	Projected sector costs exceed revenues in the next ten years due to increased costs and reduced revenues due to lower vehicle import tariffs.	<i>Fiscal and Financial Policy:</i> - Gasoline surcharges to cover the Highway Maintenance Fund needs. - Study the possibility of reintroducing tolls on selected highways. - Study the concession of highway maintenance and rehabilitation. - Consider introducing special benefit fees, such as tax increment financing and special assessments to finance new construction around main cities.

Source: Frederic R. Harris, Inc.

8.5.4 Rail Subsector

The main issue regarding rail transport in El Salvador is its financial feasibility. Of all possible scenarios evaluated in this study, the total closure of the railroad system is the only feasible scenario from a financial viewpoint. All other scenarios would require investments in track rehabilitation and show negative cash flows.

Based on this result, the Consultant proposes:

- ✓ Close the railroad system and sell all assets at its best possible market value, if maximizing financial benefits is the Government's objective.

If total closure of the system is not economically or socially acceptable and the Government of El Salvador considers it necessary to continue with railroad service at its maximum advisable level, then the scenario which retains Acajutla-San Salvador service and Metapán-San Salvador service with a Santa Ana connection, provides the highest operating margin (operating revenues less operating costs), but also requires the highest investment outlays.

There would be limited funding sources for any railroad rehabilitation scheme. Given the poor financial performance of the railroad, privatization is, for now, not a viable option. As in other countries, joint government-shipper-railroad financing may be a possibility.

FENADESAL's financing possibilities are very limited and shippers' participation may be possible, (particularly with rolling stock), although very dim. However,

- ✓ Funding for rail investments should be made mainly by the national treasury.
- ✓ Should it be decided to continue railroad service, FENADESAL should become a government-owned company.

Then the consultant recommends taking steps to increase the railroad's efficiency and responsiveness, such as:

- ✓ Subsidies to be provided as Public Service Obligation (PSO) grants to pay for government-mandated services, or justified by forecasted reduction in road congestion and air pollution costs.
- ✓ Include adjustments to accounting system in proposed legislation, to provide market-oriented management information.

Table 8.5.3 summarizes the rail subsector fiscal and financial constraints and related proposals previously discussed.

TABLE 8.5.3
Fiscal and Financial Constraints and Proposals
Rail Subsector

CONSTRAINT	ANALYSIS	POLICIES AND PROPOSALS
Poor financial performance of the railroad	Except for the total closure of the railroad system, negative financial performances are forecasted for all scenarios.	<i>Financial Policy: Resource Efficiency.</i> From a financial perspective, the preferred alternative is the total closure of the railroad system.
Limited funding sources	Needed investments are intensive in local resources, with limited possibilities of external funding.	Funding for rail investments to be provided mainly by the national treasury.
Difficult-to-plan subsidies	Provided to cover operating deficits, rather than determined a priori.	Subsidies only as Public Service Obligation (PSO) grants to pay for government-mandated services.
Government-mandated accounting system.	This system is difficult to use for commercial business	<i>Modernization: Regulation</i> Include adjustments to accounting system in proposed legislation.

Source: Frederic R. Harris, Inc.

8.5.5 Port Subsector

Financial issues in the port subsector include the Port of Acajutla's relatively high operating costs and tariffs with respect to neighboring ports, which puts it in a competitive disadvantage; the low tariffs for containerized cargo compared with specialized terminals; and the lack of a cost accounting system developed to provide timely management information on activities and type of cargo costs. Other main issues on the proper role of CEPA and the possibility of concessions to improve port performance, were discussed in the previous section and Task 5 as part of the institutional constraints and proposals.

Current operational procedures and productivities in the Port of Acajutla generate high port costs. Gang sizes and inactive times are higher than what would be expected in current efficient operations, and could be lowered to attain better performances. Therefore, the Consultant recommends CEPA:

- ✓ Introduce operational improvements proposed in Task 5 in terms of reduced gang sizes and inactive times.

Reducing inactive times to about 20% of the total ship's port time, instead of the current 30%, reducing gang sizes in almost all operations (loading/unloading, transferring and warehouse operations), and introducing other efficiency improvements, would reduce operating costs, increase productivity and would allow the Port of Acajutla to improve its

operating costs, increase productivity and would allow the Port of Acajutla to improve its competitive position.

The Port of Acajutla is limited in its capacity to identify ways to increase port performance due to CEPA's accounting system. While suitable for responsibility costing, it does not produce management reports to accurately evaluate the efficiency and costs of port operations by type of cargo. To correct this problem, the Consultant recommends CEPA:

- ✓ Develop and implement a management cost accounting system that reports on individual cargo and operations.

This system need not be too complex, but it ought to use existing accounting and statistical inputs and produce summarized information detailed by the main port operations and cargo categories.

In preparing revenue and cost projections for the proposed port projects, it becomes clear that current container tariff levels, while appropriate for non-specialized terminals, do not provide the revenues needed to properly construct, maintain and operate an specialized container terminal. Thus, the consultant proposes:

- ✓ Increase rates for specialized container terminals to attain an average of 200 colones per ton at current price levels, similar to those applied in other countries.

Table 8.5.4 summarizes the port subsector fiscal and financial constraints and related proposals previously discussed.

TABLE 8.5.4
Fiscal and Financial Constraints and Proposals
Port Subsector

CONSTRAINT	ANALYSIS	POLICIES AND PROPOSALS
Incomplete accounting system	The Port of Acajutla does not produce management reports to accurately evaluate the efficiency and costs of its operating activities by type of cargo.	<i>Modernization: Control</i> Develop and implement a management cost accounting system that reports on individual cargo and operations.
High operating costs in the Port of Acajutla	Current operational procedures and productivities generate high port costs in the Port of Acajutla	<i>Modernization: Re-engineering</i> Introduce operational improvements proposed in Task 5 in terms of reduced gang sizes and inactive times.
Low tariffs for containers	Current tariffs not applicable to specialized terminals	<i>Tariff Policy:</i> Increase rates for specialized terminals to attain an average of 200 colones per ton, similar to those applied in other countries.

Source: Frederic R. Harris, Inc.

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The International Airport is self-sufficient. The main financial issues regarding its air cargo, has to do with deficient tariffs: inadequate air cargo handling tariffs, insufficient cargo space charges, and no fees for export and transit cargo.

AIES cargo handling charges do not reflect the excessive time cargo occupies prime apron-front space. The long basic storage time, with no additional charge, does not induce consignees to retrieve its cargo in a timely manner, thus using up needed warehouse space. Therefore, the Consultant recommends:

- ✓ Revise and update cargo handling charges to a graduated scale of fees to encourage consignees to pick up their cargo quickly.

Current AIES air cargo space tariffs of 32 colones per square meter per month do not cover costs. Based on a simplified airport cost model (and, therefore its results should be taken as indicative only), the study estimates direct (variable) costs per square meter of cargo space at 47 colones and total costs at about 85 colones per square meter per month. Thus, the consultant recommends:

- ✓ Review and update cargo space rental fee to cover the costs of facility construction, maintenance, and operation.

AIES does not currently charge a fee for export and transit cargo. This cargo is currently handled in private warehouses, but is often left outside in apron areas or nearby. Export and transit cargo should be assessed a basic tariff to cover its use of AIES common facilities. It is incumbent upon CEPA to charge fees commensurate with infrastructure use and impact. Export and transit cargoes occupy apron space, export cargo occupies access roads and space, representing valid airport uses for which fees are justified. Therefore, the consultant recommends CEPA:

- ✓ Consider levying a per-kilo charge on export and transit cargo commensurate with handling costs, infrastructure use and impact.

At Ilopango airport, fees have not kept up with inflation and, at their current levels, are unjustifiably subsidized by the national treasury. Therefore, the Consultant recommends:

- ✓ Review and update Ilopango airport fees to allow its limited traffic to make a reasonable contribution to the upkeep of its facilities.

Table 8.5.5 summarizes the air transport subsector fiscal and financial constraints and related proposals previously discussed.

TABLE 8.5.5
Fiscal and Financial Constraints and Proposals
Air Transport Subsector

CONSTRAINTS	ANALYSIS	POLICIES AND PROPOSALS
Inadequate air cargo handling charges.	AIES cargo handling charges do not reflect excessive time cargo occupies prime apron-front space.	<i>Tariff Policy:</i> Revise and update cargo handling charges to a graduated scale of fees to encourage consignees to pick up their cargo quickly.
Inadequate cargo space charges.	AIES cargo space rental fee for export and transit cargo appears too low to cover costs.	Review and update cargo space rental fee to cover the costs of facility construction, maintenance, and operation.
No fees for export and transit cargo.	AIES does not currently charge a fee for export and transit cargo.	Consider levying a per-kilo charge on export and transit cargo commensurate with handling costs, infrastructure use and impact.
Inadequate Ilopingo airport fees.	Ilopingo airport fees are unjustifiably subsidized by the national treasury. DGTA airport and aircraft charges have not been changed since 1975.	Review and update Ilopingo airport fees to allow its limited traffic to make a reasonable contribution to the upkeep of its facilities.

Source: Frederic R. Harris, Inc.