United States General Accounting Office

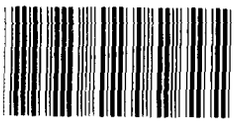
GAO

Report to the Congress

January 1988

DRUG CONTROL

U.S.-Mexico Opium Poppy and Marijuana Aerial Eradication Program



GAO/NSIAD-88-72

GAO
United States
General Accounting Office
Washington, D.C. 20548

**Comptroller General
of the United States**

B-225282

January 11, 1988

President of the Senate and the
Speaker of the House of Representatives

The Anti-Drug Abuse Act of 1986 requires the Comptroller General to conduct a thorough investigation to determine the effectiveness of the international narcotics control assistan provided pursuant to the Foreign Assistance Act of 1961 (22 U.S.C. 2291) and to report tc the Congress periodically as portions of the investigation are completed.

This report responds to the legislative requirement and covers our review of the U.S.-Mex opium poppy and marijuana aerial eradication program.

We are sending copies of this report to the Secretary of State; Attorney General; Director, Office of Management and Budget; and Chairmen, House Committee on Foreign Affairs an House Select Committee on Narcotics Abuse and Control.

Frank C Conahan

for Charles A. Bowsher
Comptroller General
of the United States

Executive Summary

Purpose

Mexico initiated its aerial drug crop eradication program in the late 1970s. At that time, the opium poppy and marijuana were grown in large, open fields, easily accessible to program aircraft. The program was able to eradicate large numbers of opium poppy and marijuana fields and, for a few years, was considered one of the most successful ir the world. However, the aerial eradication program has not kept pace with cultivation, and Mexico is currently a primary source of the heroir and marijuana available in the United States.

The United States and Mexico have supported the aerial eradication pr gram, with a bilateral cost of more than $118 million during 1984-87. GAO reviewed this program in accordance with section 2007 of the Anti-Drug Abuse Act of 1986, which requires that GAO investigate the effectiveness of assistance provided through the U.S. international narcotics control program. Specifically, GAO examined the extent to which (1) the eradication program has reduced Mexican opium poppy and marijuana crops, (2) aircraft and other resources provided by the United States have been used effectively, and (3) bilateral agreements provide for the cooperation needed to eliminate opium poppy and marijuana crops quickly and efficiently.

Background

According to the Department of State, crop control is a cost-effective and efficient element of a narcotics control strategy. Mexico's early control efforts emphasized manual eradication, which was insufficient. In late 1976, the government of Mexico began using helicopters to spray herbicides on illegal cultivations of the opium poppy and marijuana and the program was an immediate success.

In March 1987, the Attorney General's Office of Mexico had more than 80 airplanes and helicopters to locate and spray illegal fields, verify eradication, and transport personnel and supplies. The United States provided about 70 of these aircraft.

The United States contributed about $14.5 million in fiscal year 1987, primarily for aircraft maintenance and training. Mexico is expected to spend the equivalent of about $21.5 million in calendar year 1987 for personnel, facilities, and insurance.

Results in Brief

It is clear that simply maintaining aerial eradication at current levels will not eliminate Mexico as a major source of heroin and marijuana.

Furthermore, it is likely that the gap between cultivation and eradication will widen unless the program is improved. Currently, however, management inefficiencies prevent the air fleet from operating at full capacity, thereby limiting eradication.

In addition, there are other program deficiencies, including unreliable information on the narcotics crop cultivation base in Mexico, absence c mutually acceptable program goals and performance standards, and incomplete procedures for validating and evaluating activities and results.

Principal Findings

Aircraft Were Under-Used

Although U.S. officials believe it is reasonable for each aircraft to be flown 80 hours a month, actual flight hours averaged 46 hours a montl primarily because of deficient maintenance and insufficient numbers o pilots due to low salaries. There was significant disagreement between the Mexican, U.S., and contractor officials as to the cause of maintenance deficiencies. Available information indicated that the responsibi ties of Mexican and contractor personnel should be more clearly define and that the follow-on maintenance contract should clarify the contrac tor's responsibility for procurement, distribution, and security of spare parts.

Also, statistics showed that helicopters were used less often for spraying than for reconnaissance and transport. Reallocation of some aircrat tasks could increase flight time available for crop eradication.

Additional Aircraft Were Purchased

U.S. and Mexican officials agreed that additional aircraft were needed increase eradication, and both countries purchased additional spray ai craft for the program. However, neither purchase was based on bilater analysis of the air fleet and agreement as to need for any changes or additions nor was endorsed by both countries.

Program Agreements Do Not Address Critical Issues

The formal agreements between the United States and Mexico, which should document mutual understandings and expectations, do not (1) address the frequency and scope for aerial surveys to help gauge the

magnitude of illicit drug cultivation, (2) include reasonable annual erac cation targets, or (3) provide for validation and evaluation of program accomplishments.

GAO Noted Similar Problems in Earlier Reviews

Despite successful eradication results, in 1977 GAO found that the program lacked reliable cultivation information and experienced management problems, such as insufficient spare parts, low salaries, and inadequate program monitoring. U.S. and Mexican program managers have not yet solved these problems or agreed on annual goals and standards for aviation management and evaluation, even on an informal basis. Since resolution of these long-standing issues is important to program success, they should be incorporated into the program's formal agreement process.

Recommendations

GAO recommends that the Secretary of State instruct the Assistant Secr tary for International Narcotics Matters to negotiate with the government of Mexico to revise the formal agreements to include provisions f developing aerial surveys of opium poppy and marijuana cultivation, setting annual eradication goals consistent with reasonable standards for aircraft use and availability, and validating and evaluating progran results.

GAO recommends that the Assistant Secretary negotiate with the gover ment of Mexico to assign responsibility for (1) determining maintenanc requirements, (2) procuring and distributing spare parts, and (3) ensuring physical security of on-hand inventories. The next maintenance services contract should provide the contractor with sufficient authority t fulfill the responsibilities it is assigned.

GAO recommends that the Secretary of State not request funding to purchase aircraft for use in the Mexico program unless the Department of State has determined (1) the eradication capability of the present air fleet if used in accordance with reasonable standards for use and availa bility and (2) the number and type of additional aircraft needed for tot narcotics crop control.

Agency Comments

The Department of State agreed with GAO's recommendations and said that negotiations between the United States and Mexico will begin shortly on a new Letter of Agreement associated with the 1988 aircraft maintenance services contract. Negotiations on other issues will follow;

however, progress may be delayed by upcoming personnel changes within Mexico's Attorney General's Office. The Department stated tha it was unable to convince Mexico to accept many of its recommendatic for the scope of work for the next contract but believes that the contr will clearly delineate contractor and Mexican responsibilities and that inventory and procurement management will be computerized. The Department also said that it will evaluate the capabilities of the curre air fleet before deciding whether additional aircraft are needed for th program.

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Abbreviations

DEA	Drug Enforcement Administration
GAO	U.S. General Accounting Office
INM	Bureau of International Narcotics Matters, Department of State
NAU	Narcotics Assistance Unit
NNICC	National Narcotics Intelligence Consumers Committee
PD&S	Program Development and Support
PGR	Procuraduria General de la Republica (Office of the Attorney General of Mexico)

Introduction

Mexico is a major source of the heroin and marijuana which enters the United States, and the flow is increasing despite years of opium poppy and marijuana crop eradication efforts. Mexico was once considered as having one of the most successful crop eradication programs in the world. However, it has been unable to significantly reduce illegal cultivation, despite more than $118 million in U.S. and Mexican funding between 1984-87 to support a bilateral aerial eradication program.

Background

According to the Drug Enforcement Administration (DEA), Mexico emerged as a prominent source of heroin to the United States in 1974, when growers stepped up production to fill the void left by the suppre sion of heroin supplies from Turkey in 1972. Although opium poppy a marijuana cultivation is illegal in Mexico, it has been spurred by the demand for heroin and marijuana in the United States. However, the 1985-1986 National Narcotics Intelligence Consumers Committee (NNICC)[1] report states that Mexico is in the early stages of a national drug abuse problem, with marijuana among the most commonly abuse substances.

According to the Department of State, crop control is a cost-effective and efficient element of a narcotics control strategy, because it minimizes the amount of drugs that can enter the international market and reduces the potential for corruption that often accompanies enforceme activities. Chemical eradication of opium poppy and marijuana is preferred to manual eradication, and aerial application of herbicides is pr ferred to on-ground application.

Initial Mexican narcotics control efforts emphasized manual eradicatio which proved to be insufficient. In late 1975, the government of Mexic decided to spray herbicides from aircraft to eradicate illegal plantings the opium poppy and marijuana. This created a need for new equipme and technical and managerial experience.

The United States provided funds to Mexico to purchase spray and su port aircraft, construct forward bases, install a communications syste

[1]The NNICC was established in 1978 to coordinate foreign and domestic collection, analysis, disse nation, and evaluation of drug-related intelligence. Membership consists of the U.S. Coast Guard; C toms Service; Departments of Defense, State, and Treasury; DEA; Federal Bureau of Investigation; Immigration and Naturalization Service; Internal Revenue Service; National Institute of Drug Abus and White House Drug Abuse Policy Office. The Central Intelligence Agency and National Security Agency participate as observers.

provide salary supplements to pilots and technicians, and hire aviati advisors.

Program Administration

Overall responsibility for U.S. international narcotics control efforts rests with the Secretary of State. The Department's responsibilities, (ried out by its Bureau of International Narcotics Matters (INM), inclu policy development and program management, diplomatic initiatives bilateral and multilateral assistance for crop control, interdiction, an related enforcement activities. It also negotiates and manages narcot control agreements with foreign governments.

INM is represented in Mexico City by the Narcotics Assistance Unit (N directed by a senior Foreign Service officer and staffed with aviatior advisors under contract with INM. DEA also has about 40 staff membe stationed in Mexico. They are involved primarily in investigation anc intelligence liaison activities; however, they also serve as U.S. observ on eradication verification flights.

Both the Mexican Attorney General's Office, or the Procuraduria Ger eral de la Republica (PGR), and the Mexican army are involved in nar ics crop eradication. The PGR concentrates on aerial eradication and h a roster of about 600 pilots, mechanics, administrative, and support p sonnel. The army concentrates on manual eradication and has a reported commitment of more than 25,000 troops. The PGR's aerial er cation program is directed by the Deputy Attorney General, with fiel operations under regional zone coordinators. At the time of our field- work, there were 13 zones, but we were advised that in May 1987 thc number had been increased to 18.

At the time of our fieldwork, the aerial eradication air fleet consisted more than 80 airplanes and helicopters under the jurisdiction of the z coordinators. The majority of the aircraft were provided by the Unit States, some were financed by Mexico, some were purchased by the P with insurance proceeds received for damaged aircraft, and some we confiscated from drug traffickers. Subsequent to our review, the PGR purchased 14 additional helicopters.

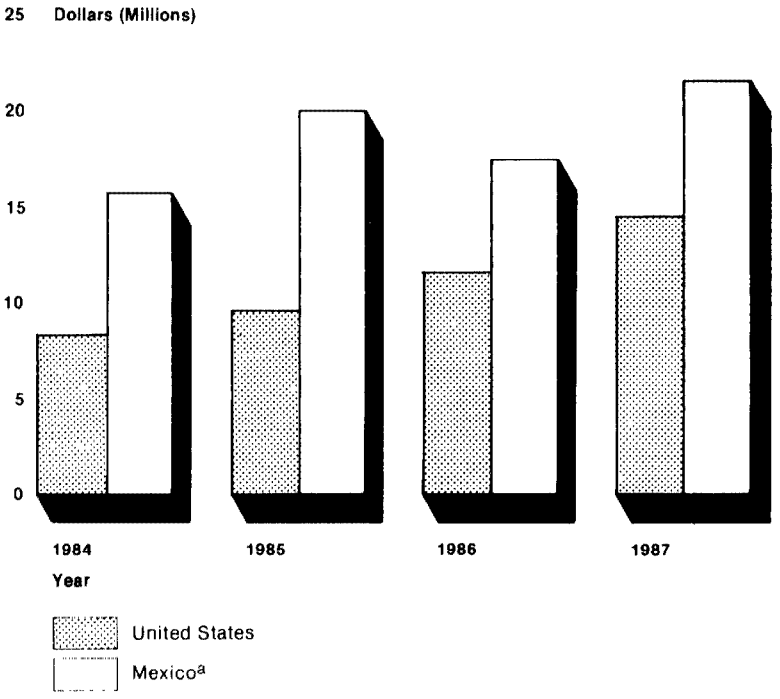
Program Costs

Mexico has traditionally received the greatest percentage of the State Department's international narcotics control budget. For fiscal year 1987, $15.5 million was allocated for Mexico, primarily for aircraft maintenance. In accordance with section 2030(c) of the Anti-Drug Ab

Act of 1986, $1.0 million of the $15.5 million was withheld pending a report from the President of the United States that the government of Mexico had fully investigated and brought to trial and prosecuted those responsible for the murder of one DEA agent and the torture and detention of another. However, the Department of State decided not to file a report under section 2030(c), and the $1.0 million was reprogrammed elsewhere in INM.

The Department of State estimated that the PGR will spend the equivalent of $21.5 million in 1987 on the eradication program, primarily for salaries, facilities, insurance, and new aircraft. According to the PGR, this represents more than 60 percent of its 1987 budget. Figure 1.1 shows U.S. and Mexico funding for the joint narcotics eradication and control program since 1984.

Figure 1.1: Funding for the Joint Aerial Eradication Program



[a]Expenditures were calculated by NAU using the following conversion rates: 1984, 167.77 pesos = $1; 1985, 256.96 pesos = $1; 1986, 611.35 pesos = $1; and 1987, 1,100 pesos = $1.

Since program inception, the United States has allocated funding amc several projects. The project categories are listed below, and U.S. fun ing for the projects for fiscal years 1984-87 is shown in Table 1.1.

- Aviation procurement and operations: Provides aircraft to the PGR fo reconnaissance, spraying, support, and verification.
- Aviation maintenance: Assists the PGR to maintain and repair the aircraft and develop the capability to maintain the air fleet without out technical assistance. A U.S. firm, E-Systems, Inc., currently assists th PGR in procuring spare parts, maintaining aircraft, and training perso nel under a U.S.-funded contract.
- Field support: Operational and ground support for the air fleet, inclu ing the costs of vehicles, fuel, herbicides, protective equipment, and upgrading field bases.
- Program development and support (PD&S): U.S. and non-U.S. personn costs and other general operational and administrative expenses whi are not related to specific projects.

Table 1.1: U.S. Budget for Aerial Eradication Program, by Project

Figures in millions

	Fiscal year			
	1984	1985	1986	
Aviation procurement	$1.450	$1.300	$0	
Aviation maintenance	6.500	7.600	8.25	1
Field support	0	.350	2.50	
PD&S	.368	.446	.85	
	$8.318	**$9.696**	**$11.60**	**$1**

Source: INM

Prior Studies

In February 1977, we issued a classified report, Opium Eradication Efforts in Mexico: Cautious Optimism Advised (GGD-77-6), which discussed the inception of the joint aerial eradication program. At that t we found conflicting information on the extent of opium poppy cultiv tion and start-up problems in the eradication program, such as lack o aviation expertise, insufficient spare parts and fuel, low salaries, and inadequate program monitoring. We recommended that the U.S. embassy in Mexico develop a comprehensive action plan to (1) clearly define U.S. program goals for assisting the government of Mexico to develop its own capacity to control narcotics and (2) develop specific objectives and evaluation criteria. The Department of State responde that efforts were underway to identify program goals and resource requirements.

Our October 1979 report, Gains Made In Controlling Illegal Drugs, Yet The Drug Trade Flourishes (GGD-80-4), discussed the Mexico program as part of the total U.S. narcotics control program. We noted that the avail ability of heroin from Mexico in the United States had decreased but that U.S. officials were undecided whether to credit the decline to eradi cation efforts or to a drought in the growing areas. The report again pointed out the absence of both country-specific and regional action plans setting forth in detail short and long-term goals, tactics, and evalu ation methodology. The report noted that without a serious assessment of Mexico's capabilities for carrying out a narcotics control program, it was not possible to know the course that U.S. efforts should follow to achieve desired results. The State Department responded that existing documentation requirements already provided the degree of planning recommended.

More recently, the Department of State's Office of the Inspector Genera reviewed overall INM management and control systems and individual NAUS. In a December 1984 report, the Inspector General recommended that narcotics production information be re-examined, aerial surveys b improved, and the NAU obtain additional advisors. In 1985, the Defense Logistics Agency reviewed the maintenance services contract between I Systems and the PGR and found that, although the maintenance operation was acceptable, PGR personnel needed more training and spare part procurement and inventory control were weak.

In 1987, several studies were initiated. The first was undertaken by an 8-member, U.S.-Mexican evaluation team which visited several program bases and tested aircraft and spray equipment. The team reported the technical capabilities of the program's equipment and its observations c program administration. It did not draw conclusions or recommend solu tions to the problems in aviation management which it reported.

The Department of State contracted with Evergreen Helicopters, Inc., t assess requirements for the maintenance services contract to be awarded in 1987. Evergreen looked at current operations and found numerous deficiencies which reduced aircraft availability. The NAU regional maintenance advisor assessed the condition of the program's major facilities. The Department of State also hired a consulting firm to review the findings of the three preceding studies and develop recommendations to improve the aerial eradication program. The firm's repor was issued on October 28, 1987.

In addition to these reviews, INM officials made periodic field trips to Mexico to monitor the program, and the NAU detailed program develo ments and problems in monthly reports it prepared for INM.

Objectives, Scope, and Methodology

Our review was undertaken pursuant to section 2007 of the Anti-Dru Abuse Act of 1986, which requires us to determine the effectiveness the assistance provided under the Foreign Assistance Act of 1961, as amended. We focused on the results and management of the joint U.S Mexico aerial narcotics eradication program. We examined the extent which

- the program has reduced the amount of heroin and marijuana grown Mexico and smuggled into the United States,
- the PGR has used U.S.-provided aircraft and other resources effective and
- the program's formal bilateral agreements provide an adequate basis the ongoing cooperation needed to eliminate the cultivation of opium poppy and marijuana in Mexico as quickly and efficiently as possible

We interviewed State Department and DEA officials in Washington, D. In Mexico, we spoke with officials of INM, NAU, DEA, the U.S. Defense Attache Office, Customs and Immigration and Naturalization Service and the embassy's consular office to determine the scope of U.S. involvement in narcotics control in Mexico. We spoke with Mexico's D uty Attorney General to obtain the Mexican government's perspectiv on the objectives, accomplishments, problems, and resource needs of bilateral effort. We also interviewed various PGR and contractor offici to obtain information on program operations.

We reviewed program files at INM headquarters in Washington, D.C., a at NAU in Mexico City to determine aircraft availability and the exten which aircraft were used. Detailed statistics were available for June 1986 through January 1987, but records prior to June 1986 were less complete. Our fieldwork in Mexico took place between February 23 a March 20, 1987.

We also reviewed NAU and DEA field reports to obtain data on changes opium poppy and marijuana growing conditions and observations on program implementation, particularly aircraft management, spare pa procurement, and aircraft maintenance. We visited the central PGR ma tenance facilities in Mexico City and the primary air base in Culiacan.

Sinaloa. We reviewed DEA and NNICC reports to obtain a historical perspective on the effectiveness of the eradication program. We did not tes the accuracy of the flight usage and eradication statistics reported by the PGR or the heroin and marijuana availability statistics reported by the NNICC. Our review was conducted in accordance with generally accepted government auditing standards.

Eradication Results

Statistical data concerning the narcotics eradication program are not encouraging. The availability of Mexican heroin and marijuana in the United States has increased in recent years despite increased program funding and increased eradication. The traditional growing areas in Mexico's tri-state region of Sinaloa, Durango, and Chihuahua remain major source of illegal narcotics from Mexico. Cultivators have changed their growing patterns in response to aerial spraying, making eradication more difficult.

The amount of Mexican heroin available for consumption in the United States decreased dramatically from its peak in the mid-1970s due to joint eradication program and unfavorable weather. In December 1979 NNICC stated that successful opium eradication campaigns in Mexico reduced the flow of Mexican heroin to the United States from 6.5 tons in 1975 to about 3 tons in 1977, while the flow of heroin from Southeast Asia increased from one to 2 tons in the same period.[1]

Cultivation and production increased as farmers became more sophisticated, fragmenting and/or concealing their fields and using irrigation. The Department of State emphasized the role that Mexico's deteriorating economy has had on the expansion of illegal cultivation. The Department also noted that the spread of cultivation beyond traditional growing areas caused the PGR to disburse its air fleet and support services over a much larger geographic area and that the increasingly complex logistics contributed to reductions in program performance.

Table 2.1 shows Mexico's growing share of the U.S. heroin market in relation to the other major supply regions of Southeast and Southwest Asia. Based on data available for the first 6 months of the year, NNICC estimates that 41 percent of the U.S. supply of heroin in 1986, or 2.8 metric tons, originated in Mexico.[2]

[1]NNICC noted that because the production and distribution of illicit narcotics is illegal, there is l reliable information upon which to base estimates of the quantities of drugs involved. The statis are reflective of the quantities of drugs which were seized and not those which were consumed.

[2]NNICC reported that the percentage of heroin attributable to specific regions is determined by oin signature analysis, which identifies and quantifies selected heroin characteristics. Using this heroin samples can be classified according to their manufacturing process and geographic sourc

Table 2.1: Heroin Available in the United States, by Source

Figures in percent

		Source		
Year	Metric tons	Mexico	Southwest Asia	Southea As
1980	3.70	37	52	1
1981	3.90	36	54	1
1982	5.47	34	52	1
1983	6.04	33	48	1
1984	5.97	32	51	1
1985	6.00	39	47	1

Source: DEA

NNICC estimates that Mexico supplied about 37 percent of the U.S. supply of marijuana in 1977 but only 3 percent in 1981 due to the successful eradication program. In 1984 Mexico re-emerged as a prominent supplier of marijuana and by 1986 it had passed Colombia as the major foreign supplier, to provide 37 percent of all imported marijuana, or 30 percent of the total U.S. supply. Table 2.2 shows the major sources of marijuana, including the United States, as estimated by NNICC. The Committee's 1985-1986 report noted that its 1986 estimates of imported marijuana were lower than those of the Department of State. The Department of State estimated that 4,000 to 6,000 metric tons of Mexican marijuana were exported to the United States in 1986. The Department of State, in commenting on our draft report, stated that it believes its estimates to be the more accurate since they are based on in-country reports rather than on seizures.

Table 2.2: Marijuana Available for Use, by Source[a]

Figures in metric tons

	Source				
Year	Mexico	Colombia	Jamaica	United States	
1977	3,960–6,040	5,540–8,460	500	700–1,400	
1978	1,600–2,210	6,100–8,200	500–660	600–830	
1979	1,110–1,500	7,450–10,100	740–1,000	700–1,000	
1980	800–1,300	7,700–11,300	1,000–1,400	700–1,000	
1981	300–500	7,500–11,000	900–1,200	900–1,200	
1982	750	7,000–8,000	1,750–2,500	2,000	
1983	1,300	6,900–9,300	1,750	2,000	
1984	2,500–3,000	4,100–7,500	1,500–2,250	1,700	
1985	3,000–4,000	2,600–4,000	350–850	2,100	
1986	3,000–4,000	2,200–3,900	1,100–1,700	2,100	1,300–

[a]These estimates represent the gross production of marijuana. From each annual worldwide total, NNICC deducts an amount representing U.S seizures, seizures in transit, and other losses. The b ance, the net amount of marijuana available in the United States, is not recalculated on a country-l country basis.

Source: NNICC

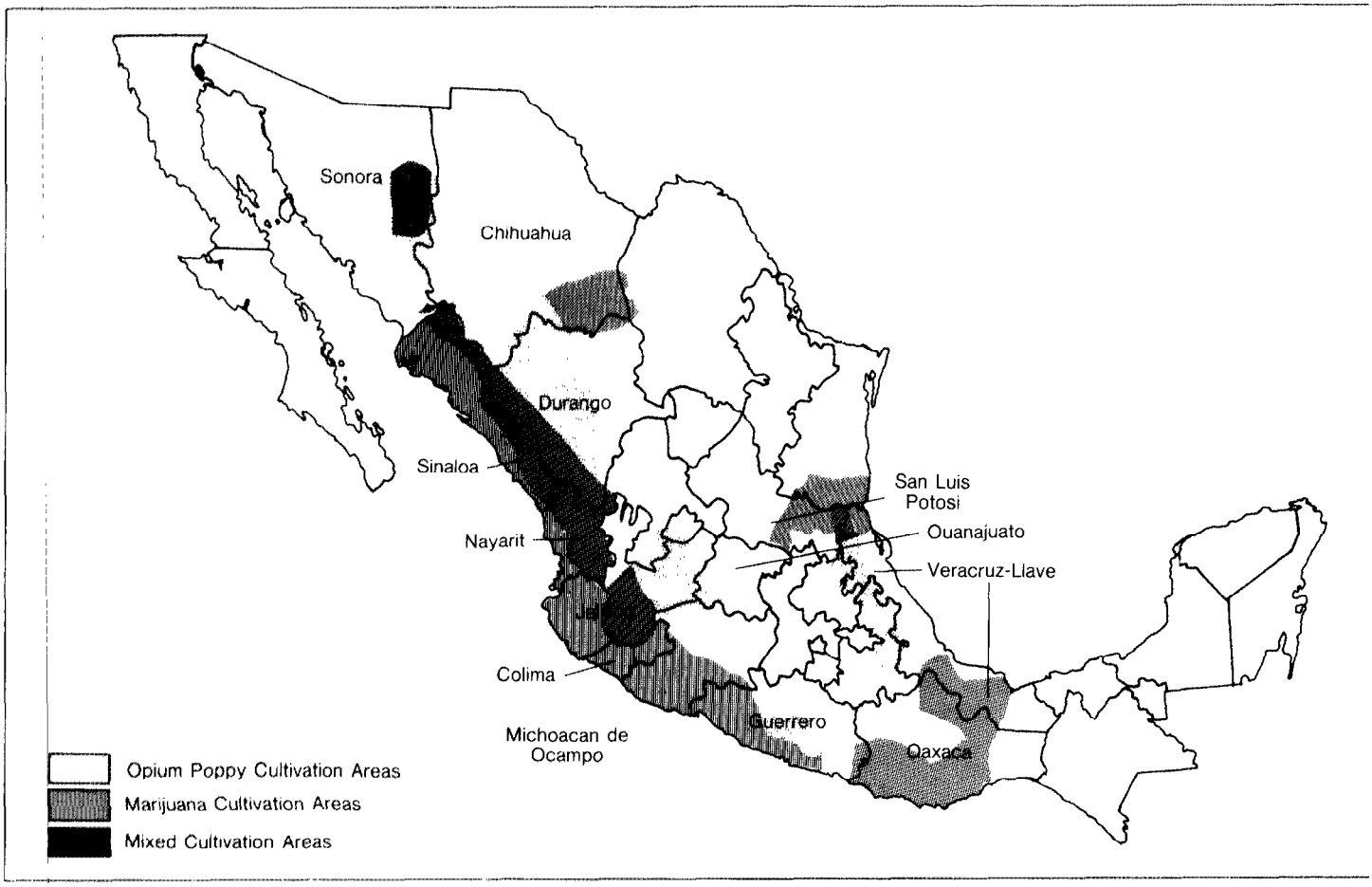
Traditional Growing Areas

The tri-state area of Sinaloa, Durango, and Chihuahua has tradition been the primary area for opium poppy cultivation. Despite years of eradication efforts to drive growers from the area, reports of fencin irrigation, and landscaping suggested that fields were prepared for multi-year use. Cultivation extends beyond this area and opium pop fields have been discovered in about three-fourths of Mexico's state Marijuana has been found virtually throughout the country. Figure shows the most significant opium poppy and marijuana growing are as determined by DEA.

Gap Between Cultivation and Eradication

INM reported that the PGR had eradicated more hectares (2.47 acres = hectare) of opium poppy and marijuana in 1986 than it had in 1985 1984. Table 2.3 shows INM's estimates of the total number of hectare opium poppy and marijuana cultivated and eradicated during 1984 through 1986. The figures show the continuing wide gap between cu vation and eradication.

Figure 2.1: Significant Opium Poppy and Marijuana Cultivation Areas



Source: DEA

Table 2.3: Estimated Cultivation and Aerial Eradication of Opium Poppy and Marijuana

Figures in hectares

	Opium Poppy		Marijuana	
Year	**Cultivated**	**Eradicated**	**Cultivated**	**Eradicated**
1984	5,200	1,126	8,700	848
1985	7,500	2,297	5,865	1,738
1986	6,000	2,383	8,430	2,973

Source: Department of State

Cultivation Techniques

Opium poppies grow best in cool climates at altitudes exceeding 2,00 feet. Seasonal patterns in opium poppy and marijuana cultivation ar harvesting have become obscured as cultivation is increasingly seen year-round.

Growing techniques have evolved to make aerial eradication more di cult. According to Department of State reports, in 1977 when eradic: tion of almost 10,000 hectares of opium poppies was reported, fields were large and in open flat areas. Cultivators reacted to the aerial er cation program by decreasing the size of their fields and planting in more remote areas, often at higher altitudes and often on the sides o steep ravines, under trees, or otherwise camouflaged. Spraying the higher, more remote fields required greater aircraft capacity for fue and herbicides and, in the opinion of U.S. observers, reduced the spr ing effectiveness of Bell 206 helicopters, the primary spray aircraft.

In 1984, NNICC attributed the increased availability of Mexican mari- juana, in part, to the use of sophisticated agricultural practices, such landscaping, fertilizers, mechanized cultivation, and irrigation in ren arid areas. In 1986, U.S. officials reported finding an increasing num of illegal fields in lowlands, with little or no attempts at camouflagin Numerous fields were planted adjacent to farm houses alongside sub tence crops, such as corn and beans. Land used to grow opium poppy and marijuana can be confiscated, which suggested that the new trer reflects a relaxed attitude on the part of the farmers.

Farmers were often able to wash off the herbicides sprayed on their plants. Farmers may also seed their fields in stages. If the PGR sprays crop when it is very young, the farmer may have time to plant anoth crop during that growing season. On the other hand, if a fully matur field is sprayed, the farmer may still be able to harvest some sprayed plants before the herbicide takes effect.

INM has pointed out that it has been difficult to convince farmers to resist pressure to grow illicit crops. INM's 1987 International Narcotic Control Strategy Report stated that because of Mexico's economic sta nation and high inflation, the

"financial rewards for a peasant to grow marijuana or opium poppy far outweig those to be received through cultivating legitimate crops. Peer pressure from ot peasants growing illicit crops adds to the incentive. Even peasants who work th fields of others growing such crops earn at least twice the prevailing minimum

wage. Thus, the growing of narcotics represents a buffer from the economic crisis...."

Small farmers grow much of the illegal opium poppy and marijuana. Processing and transportation has generally been handled by a few larger organizations which have controlled the Mexican illegal narcotics trade for years. However, according to DEA, heroin production and trafficking has been changing. Farmers who once depended on a middleman to purchase their opium gum for processing have become their own chemists, producing a less refined but more potent "black tar" heroin.

DEA intelligence reported in 1984 that black tar heroin was being manufactured in western Mexico and distributed through extended family connections in the United States. The self-contained manufacture and distribution of black tar heroin provided immensely increased profits for the small operator and unwanted competition for the traditional traffickers. NNICC reported that during 1985 black tar heroin was smuggled into the United States primarily by migrant workers and illegal aliens. In 1986, however, it was also smuggled by the traditional trafficking organizations.

DEA reported that the spread of Mexican black tar heroin into many areas of the United States has been the most significant recent change in the Mexican situation. The popularity of black tar heroin stems from its high purity, low price, and widespread availability. One of the most worrisome effects of black tar heroin has been the sharp increase in heroin-related hospital emergencies as a result of its high purity.

Corruption

We did not pursue the issue of corruption within the eradication program. However, numerous INM documents point to corruption as a problem which reduces program effectiveness. Department of State and DEA officials have testified before Congress that corruption in Mexico's law enforcement organizations has had an undetermined, but certainly detrimental, effect on the eradication program and DEA noted that corruption led to tolerance of increased cultivation, which increased crop eradication requirements.

Operational Inefficiencies of the Air Fleet

The PGR's use of its air fleet, largely purchased and maintained at U.S expense, did not meet U.S. expectations. Aircraft were flown fewer tl the 80 hours a month minimum considered reasonable by the NAU. He copters were used less often for spraying than for reconnaissance an transporting personnel and supplies. Maintenance was plagued by po management practices, which not only increased maintenance time, thereby limiting aircraft availability, but also increased U.S. costs. As result of these problems, the aerial program failed to achieve higher levels of crop destruction.

Air Fleet Configuration

The aircraft were used for locating and spraying illegal cultivations, providing aerial protection to spraying aircraft, verifying eradication and transporting equipment and PGR and military personnel. At the ti of our fieldwork, the eradication program's air fleet included

- 43 Bell 206 helicopters,
- 12 Bell 212 helicopters,
- 21 Cessna 206 airplanes, and
- 7 other airplanes.

About 70 of these 83 aircraft had been purchased solely with U.S. fur The PGR purchased 14 additional Bell 206 helicopters for delivery in 1987.

Under-Use of Aircraft

The PGR and INM had not agreed on the number of flight hours each ai craft should be flown each month. In the absence of a mutually accep ble use standard for the U.S.-furnished aircraft, NAU, based on the professional judgement of its regional aviation advisor and the maint nance contractor's chief pilot, estimated that each aircraft could be flown 80 hours per month.

We did not verify whether this was a realistic standard. However, for the lack of any other standard, we compared it to actual program stat tics for June 1986 through January 1987, which showed the air fleet was flown an average of 46 flight hours per aircraft per month. Durir this period, the Bell 206 and Bell 212 helicopters and the fixed-wing Cessna 206s averaged 52, 43, and 33 hours of flight a month, respec- tively, which suggested that the current air fleet was under-used.

U.S. officials have identified several causes for such under-use, primarily the low percentage of aircraft available for operations and the PGR's inability to keep a full roster of trained pilots.

Maintenance and Inventory Problems

Optimum aircraft availability depends on a smoothly running, efficient operation which maintains aircraft according to applicable government and manufacturer standards in the least amount of time and at the lowest cost possible. However, several studies of the program's maintenance operations show that the program managers were unsuccessful in keeping recommended numbers of aircraft in running order and available for operations. Poor linkage between aircraft use, maintenance scheduling, procurement, and inventory control functions lengthened the time aircraft spent on the ground for routine inspections and repair and resulted in shortages of frequently used parts and an overly large inventory of slow-moving parts.

Although the PGR and the NAU have not agreed upon a standard for aircraft availability, they agree that current performance is unsatisfactory. However, the PGR, E-Systems, and the Department of State disagreed on the causes of this poor performance. The PGR maintained that many aircraft were unavailable because inadequate and/or delayed U.S. funding prevented adequate procurement and timely delivery of spare parts. The PGR acknowledged that maintenance operations could be more efficient but also complained of poor maintenance and procurement by E-Systems. U.S. officials denied that inadequate U.S. funding caused spare parts shortages and maintenance delays and blamed the shortages of spare parts on unwise purchasing, untimely orders, inefficient management of the spare parts inventory by E-Systems and the PGR, and inefficient inspections procedures. E-Systems denied responsibility and asserted that its contract with the PGR did not give it sufficient authority to control the procurement, storage, or distribution of spare parts.

U.S. and PGR officials were negotiating the scope of work for a contract which was scheduled to be opened for bids in late 1987. The U.S. embassy was unable to convince the Mexican government to permit a direct contract between the Department of State and the maintenances services contractor, to be administered jointly by the NAU and the PGR. In addition, according to the Department of State, the current Mexican administration rejected all U.S. proposals to give the contractor a managerial/supervisory role or any responsibility for inventory control. The PGR will assume all responsibility for aircraft maintenance. However, the PGR agreed to require the contractor to use a computer to manage parts

procurement and advised the NAU that it is installing a computerized inventory control system.

Maintenance Budget

In fiscal year 1987, nearly 85 percent of INM's budget for Mexico was spent on aircraft maintenance. Table 3.1 shows the steady growth in U.S. contributions for maintenance during 1978 through 1987, due in part to increases in the size of the air fleet.

Table 3.1: U.S. Funding for Aviation Maintenance

Funding in millions

Fiscal year	Fun
1978	
1979	
1980	
1981	
1982	
1983	
1984	
1985	
1986	
1987	

Source: INM

In general, the PGR has provided the facilities and personnel and supe vised the procurement, storage, and distribution of spare parts and maintenance systems needed to maintain the air fleet. The United St has provided funds for technical advisors, spare parts, repairs, and overhauls through a contract with E-Systems, Inc.

PGR Contracts for Maintenance Services

E-Systems, a firm based in Dallas, Texas, has held a maintenance ser- vices contract with the PGR since 1977. In 1982, the contract was ope for competition and E-Systems was reselected. The current contract expire on December 31, 1987. However, an extension through March 1988 has been arranged because of prolonged negotiations between t United States and the PGR over the scope of work for the next contra

According to the Department of State, the contract combined several methods of payment; it is part "time and materials" and part "cost-p fixed fee". Personnel costs are billed at set monthly rates. Bonuses,

travel, parts, shop equipment, and engine overhaul costs are handled o a cost-plus-fixed-fee basis.

The contract requires E-Systems to provide advisory and procurement services to PGR personnel involved in aircraft maintenance. The contrac funded 37 E-Systems positions, such as general manager; supervisors f procurement, base operations, maintenance, and training; advisors for supply, engine shop, sheet metal, and helicopters; and flight instructors E-Systems is primarily tasked to provide advice and assistance to the PGR maintenance operation and to procure necessary spare parts as authorized by the PGR contract administrator. Although the contract indicated that E-Systems would help the PGR to achieve an aircraft avai ability rate of 90 percent, the contractor did not have authority over maintenance activities or the parts inventory.

In commenting on this situation, a U.S. official wrote that:

"Without the authority to control basic functions (inventory control, quality control, scheduling of repairs/overhauls) no contractor can be held responsible for inadequate performance.... An extremely high premium is paid for the present method of providing parts for the program. In addition, the present system does no create a direct line of responsibility for the identification, ordering, and delivery of required parts."

In conducting its evaluation of maintenance requirements, Evergreen Helicopters, Inc. reported that, although E-Systems believed it had successfully fulfilled the contract's terms to advise and assist the PGR, the PGR believed that E-Systems had been most helpful in providing hands-on maintenance to alleviate shortages of trained PGR mechanics.

The NAU and the PGR have not agreed on an acceptable standard for aircraft availability. Although the contract between E-Systems and the PG aimed for 90-percent availability, we found that U.S. officials and evalu ators considered 80-percent availability a more realistic goal for mainte nance. In its comments on a draft of this report, the Department of Stat noted that the PGR asserted that 60-percent availability is more reasonable because it believes that is the rate achieved by U.S. military helicopter fleets with comparable operations. We have been advised by the U.S. Army that the availability rate for its light observation helicopters during a recent 12-month period ranged from 74 to 79 percent.

In November 1986 and January 1987, the PGR reported that availabi was about 50 percent. Reports and statements from the bilateral eva tion team, Department of State, PGR, and E-Systems indicated that a ability actually ranged from 40 to 70 percent and that repairs took significantly longer than expected. For example, an E-Systems offici said a 100-flying hour inspection for Bell 206 helicopters should be c pleted within 8 hours but had taken 4 days and that a 1,200-flying h overhaul which normally should be completed within 4 weeks took 6 8 weeks.

Lengthy repair times were due, in part, to poor coordination betwee PGR maintenance and aviation managers. A PGR official showed us annual maintenance schedules his office had prepared to ensure that aircraft arrived for routine maintenance in an orderly fashion and tc allow for timely procurement of sufficient supplies for routine, pred able maintenance. However, zone coordinators ignored the schedules and, as a result, repair facilities were often overloaded and aircraft h to wait.

Inventory Practices

The various study teams also found severe problems in inventory ma agement, including an ineffective inventory distribution system. The bilateral evaluation team reported a shortage of nuts, bolts, and rive at every location it visited. An E-Systems maintenance official in Cul can said the facility was constantly short of such basic supplies as n bolts, screws, oil, and hydraulic fluid. Both PGR and E-Systems offici told us that although there was an adequate supply of the more expe sive repairable components, there were recurring problems getting b broken and repaired parts transferred between field bases and the m tenance facility in Mexico City.

Difficulties in ensuring adequate supplies and timely delivery of part encouraged cannibalization, whereby good parts were removed from aircraft on the ground for maintenance and used to replace unavailal parts on another aircraft, keeping the second aircraft operational. According to the Evergreen evaluation, cannibalization is an unacce able practice in the aircraft industry because it increases the risk of human error.

Despite complaints caused by the supply problems, inadequate atten had been paid to the on-hand inventory of spare parts. The latest ph cal inventory count, in August 1986, valued the inventory at the Mex City warehouse at more than $10 million. According to Evergreen, th

inventory was made in a very unorganized manner and did not include stock in warehouses outside Mexico City or items being repaired or ove hauled. The count disclosed numerous discrepancies, which were still unresolved at the time of our fieldwork.

Evergreen estimated the value of the total inventory at between $13 million to $18 million, but stated that a reasonable inventory for this program would be $7 million, given the distance of PGR facilities from suppliers and the unreliable methods of shipping. Accordingly, the inventory contains excess spare parts which may have cost the United States between $6 million and $11 million. Many of the parts were purchased in quantities exceeding inventory levels recommended by industry. In some cases, the over-supply caused parts to exceed shelf-life. Th inventory also contained parts for aircraft models no longer in the fleet.

A 1985 maintenance review found that the maximum/minimum inventory levels noted on the control cards "desperately" needed adjusting and that "literally hundreds" of line items had little or no use and should be removed from the inventory. In January 1987, a NAU official provided Bell Helicopter with a list of Bell parts in the inventory to see which parts could be returned for credit against future purchases.

Various reports suggested that computerizing the inventory management system could

- be less time-consuming than the present manual system,
- help procurement forecasting by tying inventory procurement to aircraft use,
- eliminate duplicate orders,
- reduce inventory imbalances,
- help monitor the shelf-life and performance of individual spare parts,
- help monitor the status of aircraft components, and
- serve as a check on maintenance practices by monitoring the use of spare parts used on individual aircraft.

Although the PGR provided much of the information needed for such a system to the NAU, which then computerized the data, the PGR continued to use the manual card system. However, the Department of State, in its comments on our draft report, stated that it has been advised that the PGR is installing a computerized inventory control system. The Department also noted that the next maintenance services contractor will be required to use a computer for procurement management.

Personnel Practices

U.S., PGR, and E-Systems officials agreed that a shortage of trained mechanics, overabundance of inspectors, and poor PGR supervision c tributed to excessive use of spare parts and extended turnaround tir for aircraft under repair. U.S. and E-Systems personnel said inexper enced mechanics were unable to troubleshoot, often misidentified pr lems, and unnecessarily removed parts during maintenance. In addit PGR mechanics "over-maintained" aircraft, following maintenance schedules exceeding manufacturer recommendations. The additional inspection items not only extended repair time, thereby reducing air craft availability, but also reduced funds available for budgeted mai nance costs.

Many mechanics receive training from the PGR and E-Systems and th leave for jobs in the private sector paying two or three times as muc During the past 11 years, more than 950 mechanics have been traine As of March 1987, 330 mechanics were on the PGR rolls. Both E-Syste and Evergreen reported that because of the low wages an undeclare work slowdown was underway.

In an attempt to increase the wages of some mechanics, the PGR pro- moted an excessive number of mechanics to inspector positions, whi further depleted the number of trained mechanics on the hangar floc and contributed to slower maintenance turnaround time. Evergreen advised U.S. officials that only 15 of the 50 inspectors used in the pr gram were necessary. An E-Systems official believed that only 6 of t more than 30 inspectors in Mexico City were needed. He said that air craft were over-inspected and the underworked inspectors focused o noncritical problems and had grounded aircraft for items as minor a paint scratches.

In March 1987, E-Systems advised U.S. officials that poor PGR super sion and lack of preventive maintenance at field bases were addition causes of slow maintenance. The absence of preventive maintenance resulted in instances where periodic inspections had uncovered 400 minor discrepancies rather than the normal 30 or 40.

PGR and E-Systems personnel had noted that the Culiacan maintenan operation lacked efficient control over maintenance personnel and th work they performed. For example, mechanics' work shifts were sch uled for working hours which roughly matched prime flying hours rather than during morning and evening hours when flying was not p sible. Evergreen and NAU reports suggested that mechanics work two shifts—the first shift to prepare aircraft for early morning flights ar

the second shift to continue working after aircraft returned from the day's missions.

In its comments on our draft report, the Department of State reported that, on advice from E-Systems, the PGR adopted the "hourly" method of inspections which requires aircraft to be grounded during major inspections. Previously, aircraft had been inspected "progressively," a method of continuous inspections which usually permits aircraft to remain available for missions. However, PGR mechanics did not fulfill the requirements for progressive maintenance, and aircraft were returned to Mexico City for major inspections in poor condition. Under the current method, aircraft are still returned in poor condition; however, availability rates were reportedly much higher under the "progressive" method. The State Department noted that the NAU has recommended to the PGR that it discuss this situation with the new contractor to determine which system may work best.

Pilot Salaries and Efficiency

Trained agricultural spray pilots are essential; however, the PGR has been unable to retain sufficient numbers of pilots to fly the program's aircraft on a full-time basis. Evergreen reported that the PGR had only 42 pilots to fly 43 Bell 206 helicopters and that a minimum of 64 pilots were needed to fly the helicopters on a full-time basis. The shortage of pilots eventually delayed the start of the fall 1987 eradication campaign. Unless actions are taken, the shortage can only worsen when the 14 new Bell 206 helicopters are incorporated into the air fleet.

The Department of State attributes the shortage of pilots both to low salaries and the inherent dangers of the eradication program. At the time of our review, PGR pilots were paid the equivalent of $300 to $400 a month while their counterparts in private industry received the equivalent of about $1,400 a month. We were told that the PGR pilots are well trained and offer attractive qualifications to private employers willing to pay larger salaries.

The United States strongly urged the PGR to increase pilot pay and offered to reinstate its past practice of supplementing PGR salaries. The Deputy Attorney General told us that accepting the U.S. offer would lead to conflicting loyalties among the pilots, and the PGR was trying to find funds to raise pilot salaries by 100 percent. The Department of State subsequently reported that the PGR granted a 40-percent salary increase in May, retroactive to March 1, 1987, but noted that because

inflation in Mexico during the preceding 12 months totaled 120 perc the increase was not expected to cure the retention problem.

In commenting on our draft report, the Department advised that, ef tive September 1987, the PGR raised pilot salaries 50 percent and oth salaries 30 percent. In addition, INM has agreed to contract for 9 inst tor pilots for 90 days to train new helicopter pilots and teach sprayi techniques to experienced pilots. To forestall future departures, the trainees will be required to pay for their training if they resign in les than 2 years and their licenses will be restricted so they cannot worl commercial enterprises.

Evergreen advised INM that it would cost $40,000 to train each repla ment pilot. The United States would probably be responsible for mos training costs since it has traditionally paid for training as part of th maintenance contract. A high percent of inexperienced pilots could increase the risk of accidents and loss of Mexican lives. There could be an increase in U.S. costs, because the United States has assumed t costs of crash repairs through the maintenance contract.

Many of the available pilots are used inefficiently. The PGR's ability spray the maximum number of opium poppy and marijuana fields is severely limited because pilots frequently work short hours or refus fly aircraft for non-existent or minor maintenance deficiencies. For example, two spray missions a day are possible from the PGR's air ba in Culiacan if the first mission begins at daybreak, because high win develop after noon. However, early starts and twice-a-day missions not routine. The fact that pilots start late and leave early suggested lack of control or commitment on the part of the zone coordinators w supervised local eradication activities.

Flight decisions, including deployment and pilot assignments, were n by the PGR zone coordinators, who, according to U.S. and E-Systems cials, generally lacked expertise in aircraft operations. We were told E-Systems, the bilateral evaluation team, and U.S. personnel that fli operations were poorly managed and unsafe pilot assignments had b made, causing at least one serious accident due to pilot error. Severa these officials suggested that a chief pilot be assigned to assist the zc coordinators with aviation discipline and safety decisions.

Methodology to Allocate Aviation Tasks

Maintenance problems and pilot availability limited the number of aircraft available for aerial spraying. However, we found that increased spraying could be achieved by examining and reallocating the tasks assigned to the air fleet.

The Department of State and PGR had not agreed on criteria for allocating aviation tasks among the various types of aircraft in the air fleet to maximize the number of hours which could be spent on aerial spraying. In addition to aerial spraying, the air fleet was expected to support or protect a spraying aircraft, locate fields, verify crop destruction, transport PGR personnel and equipment and military personnel assigned to manual eradication, and conduct search and rescue missions. Aircraft also accumulated nonproductive flight hours while being ferried between bases, flown for maintenance checks, and used in training.

Only the 55 helicopters in the PGR air fleet were capable of aerial spraying. Table 3.2 shows the average percent of flight time spent on various tasks by the four categories of aircraft. Although the Bell 212 was often cited by U.S. officials as the more effective helicopter for spraying, it was primarily used to ferry military troops to remote growing areas for manual eradication because of its large passenger capacity.

Table 3.2: Flight Time Spent on Major Aviation Tasks, by Aircraft Type

Figures in percent

	Time Spent Per Month			
Task	**Bell 206**	**Bell 212**	**Cessna 206**	**Twin Otter**
Spraying	21	9	0	0
Spray support	23	8	1	0
Verification	1	1	24	0
Reconnaissance	30	8	38	0
Transportation[a]	13	57	22	93.0
Transfer[b]	8	11	11	6.0
Maintenance	2	2	2	.5
Training	2	4	2	.5
	100	**100**	**100**	**100.0**

[a]Includes ferrying troops and transporting supplies and PGR personnel.

[b]Ferrying aircraft between bases of operation.

Source: NAU

A different method of allocating aviation tasks might have increased the number of flight hours available for aerial spraying. As shown, the Bell 206 helicopters spent 30 percent of their flight hours in reconnaissance.

The Cessna 206s were used an average of 33 hours a month. If they been used in accordance with NAU's standard of 80 hours of flight ti month, additional flight hours would have been available to perfor reconnaissance actually flown by the Bell 206 helicopters, and the h copters could have used their freed flight hours for aerial spraying.

The NAU had not developed a standard for allocating aviation tasks maximize spray time and NAU officials, therefore, were unable to de mine whether they agreed with the PGR's allocation of aviation task The Deputy Attorney General of Mexico told us that the use of helic ters for non-spraying purposes reflected the PGR's pressing need for additional aircraft. The PGR, he said, had insufficient aircraft to per the various aviation tasks needed to support the eradication progra and to increase spray time.

Attempts to Increase Spraying by Adding Aircraft

Both the United States and Mexico recognized the need to significan increase eradication of the opium poppy and marijuana. Officials fr both countries acknowledged that the current air fleet had the capa for additional spraying if operational changes were made. However they apparently agreed that additional aircraft promised more imm ate increases in eradication.

In addition to the 83 aircraft permanently assigned to the eradicatic program, the United States provided fixed-wing Turbo Thrush airc on an experimental basis to increase the program's eradication resu The United States retained title to the aircraft. Turbo Thrush testin began in 1983, and Department of State officials believed the plane were a success. Turbo Thrushes eradicated 517 of the 3,405 hectare opium poppy and marijuana eradicated during June 1986 through J ary 1987.

Nonetheless, the PGR has disputed the appropriateness of the Turbo Thrushes for the eradication program in Mexico. One recurring poin contention was the PGR's lack of pilots qualified to fly the Turbo Thrushes, which consequently had to be flown by U.S. instructor pi under contract to INM. In addition, the PGR contended that because o their speed the Turbo Thrushes oversprayed illegal fields and spray legitimate crops, were unable to spray marijuana fields to ensure destruction of the entire plant, and were unsafe in mountainous gro areas. While we were in Mexico, one of the Turbo Thrushes flew int mountainside in the tri-state area, killing both the PGR navigator anc U.S. pilot. The crash ended discussions on the aircraft's role in Mexi

and by April 1987, INM had reassigned them to other countries. These were not the only 1987 program fatalities. In April a PGR crew, including the pilot, navigator, fumigation technician, and police guard, were killed in action.

In November 1986, during a weekly program meeting, the PGR advised NAU that it might buy additional aircraft to improve eradication results. NAU suggested that the purchase be based on a joint study of program needs, perhaps by the upcoming bilateral evaluation. In January 1987, the PGR announced it was conducting a study of aircraft requirements, with an emphasis on aircraft which could be operated and maintained by Mexicans, and had arranged a visit to Bell Helicopter. In March, Mexico's Deputy Attorney General estimated that 24 additional Bell 212 helicopters were needed to effectively eradicate opium poppy and marijuana cultivation. The PGR has purchased 14 additional Bell 206 helicopters, which were scheduled to be delivered in stages throughout the remainder of 1987.

A U.S. official told us the PGR purchased a small version of the Bell 206 helicopter because it believed the smaller helicopter would be more efficient at spraying the smaller, scattered fields. The official did not know what increase in eradication the PGR expects to achieve with the 14 additional helicopters. U.S. officials believe the small Bell model chosen was not the best choice for the program because of its relatively limited capabilities at higher altitudes.

Neither the United States nor Mexico made a decision about additional aircraft on the basis of a bilateral assessment and agreement of the aircraft's appropriateness for the Mexico program in relation to program needs; as a result, neither decision received the full endorsement of the other government.

Lack of Agreement on Program Goals and Standards

The United States and Mexico have been partners in the narcotics e cation program for more than a decade without agreeing on such cri issues as the frequency and scope of surveys to determine the exten illegal cultivation, annual eradication objectives, standards for avai ity and use of U.S.-funded aircraft, and methodology to verify and e uate program results.

Bilateral agreement on program goals, standards, and evaluations w provide a framework for improved program management. Mexico's mitment to implementing the agreements would become a factor in t U.S. President's annual review and certification of Mexico's coopera in controlling drug trafficking.

Bilateral Agreements

According to INM internal guidance, bilateral narcotics control progr should develop documentation to clearly record, at a minimum, mut accepted goals and funding commitments. Because only the most ba information necessary to obligate U.S. funds need appear in a forma country-to-country agreement, INM advised that agreements should l supplemented by a series of detailed annexes. Together, the agreem and annexes would serve to

- state commitments and objectives agreed to by both parties;
- present meaningful, informative summaries of individual projects;
- clarify project goals, schedules, performance standards, progress in tors, and resources; and
- obligate INM funds.

Since the early 1970s, the United States has used Letters of Agreem to advise Mexico that funds were available for a general project cat gory, such as aircraft procurement or maintenance. As a rule, Mexic prepared complementary letters accepting the funds and agreeing tc them for the stated purpose. The Letters of Agreement were not acc panied by the detailed annexes recommended by INM and were used marily as a mechanism to update funding commitments. INM officials told us that this pattern developed in response to Mexico's reluctanc sign detailed agreements and the initial practice became standard pr dure over the years. There is no comparable exchange of letters acknowledging Mexico's funding commitments.

Our analysis of recent Letters of Agreement showed that they conta no statements of objectives or discussions of the program's progress terms of its objectives, virtually no information on the projects beinç

funded, and no statements of timetables or performance standards. The Letters essentially served only to obligate INM funds and to restate a few general conditions attached to the funding. The three Letters of Agreement described below illustrate current procedures.

By letter dated November 3, 1986, the U.S. ambassador advised the Attorney General of Mexico that the United States was ready to provide $8.5 million from fiscal year 1987 funds for the aircraft maintenance contract. This two-page letter constituted the 30th amendment to an agreement dated June 2, 1977. The only condition explicitly stated in this letter required that proceeds from the sale of property purchased with the funds be used only for opium poppy and marijuana eradication and narcotics interdiction. The letter noted that the provisions of all previous agreements between the two governments concerning narcotics control remained in effect. Mexico's Attorney General accepted the U.S. funds by letter dated November 28, 1986.

By exchange of letters in August and September 1986, the United States made available $500,000 for fuels, herbicides, per diem, and other program support costs and agreed to make available five additional Turbo Thrushes for use in the fall 1986 program. The letters also specified that insurance proceeds derived from claims presented for crash-damaged aircraft purchased pursuant to these accords would be used to repair or replace the aircraft and/or for other high-priority program needs.

By letter dated September 27, 1986, the United States provided $1.3 million for "field support and support of the aerial survey program". Authorized use of field support funds was not specified, but aerial survey support funds were available for modification of a PGR aircraft and installation of an aerial survey camera. The extent or scheduling of aerial surveys was not discussed.

Earlier agreements were equally brief but occasionally contained potentially valuable control mechanisms which have not been effectively implemented. For example, in 1977 the United States and Mexico agreed to undertake periodic joint audits of the then-current maintenance contract and annual evaluations of the progress of the program and to take mutually acceptable actions based on the audit and evaluation results. In August 1978, Mexico agreed to

- provide and develop means to retain sufficient qualified personnel;
- maximize, as mutually agreed, the availability and use of aircraft provided by the United States; and

- examine its air fleet devoted to the narcotics program to determine which aircraft should be removed in the interests of operational efficiency.

Although these conditions are still in effect, for all practical purpos they are moot due to long-term neglect.

Cultivation Data

The Letters of Agreement did not contain mutually agreed plans for frequency and scope of cultivation surveys. This omission is particu important, since the program has had continuing difficulty in estim the extent and location of illegal cultivation throughout Mexico des past efforts to develop an effective aerial survey component. In our ruary 1977 report, we noted that although Mexico was the top-prio country in the U.S. international narcotics control program, there w insufficient information to accurately gauge the magnitude of illicit cultivation in that country. Ten years later, the extent of illegal cult tion is still not known.

In accordance with Department of State guidance, NAUs are respons for developing effective crop survey techniques. INM determined tha aerial surveys would be less costly if the PGR could make them rathe than contracting for the service. A U.S. firm made a test in Februar 1986 and photographed most of the growing areas in zone 6 and po tions of zone 2. Photo interpretation was finished in September 198 The United States then made funds available to modify a PGR aircra and to install an aerial survey camera. INM hoped that an aircraft w be modified and ready to survey by early 1987. However, Departme State delays in contracting for the camera and modification have delayed scheduled implementation until early 1988. The Departmen State reported that it would fund another contract with a U.S. firm make an aerial survey of the state of Guerrero in early 1988 and wa working with Mexican officials on the details for an on-ground surv the state of Vera Cruz. The Department of State noted that arrangin these surveys is time-consuming because they must be approved ind ually by the Mexican National Institute for Statistics, Geography an Information.

The U.S. embassy in Mexico has suggested that the program will ev ally need as many as three aircraft equipped with aerial cameras to cover all major growing areas on a timely basis.

We were told that several U.S. officials had seen some opium poppy and marijuana fields marked with flags, and they believed those fields were somehow off-limits to the spray program. We analyzed data on the extent of eradication accomplished in each of the 13 zones during June 1986 through January 1987. Figure 4.1 shows the 13 PGR operating zones in effect at the time of our review. As table 4.1 shows, the greatest number of spray missions and crop destruction took place in zone 6, which is carved from the tri-state region of Durango, Sinaloa, and Chihuahua, considered to be the primary growing area for opium poppies and marijuana. However, little eradication took place in neighboring zone 5, which includes the greatest portion of the State of Durango and shares the same mountain range favored by growers in zone 6.

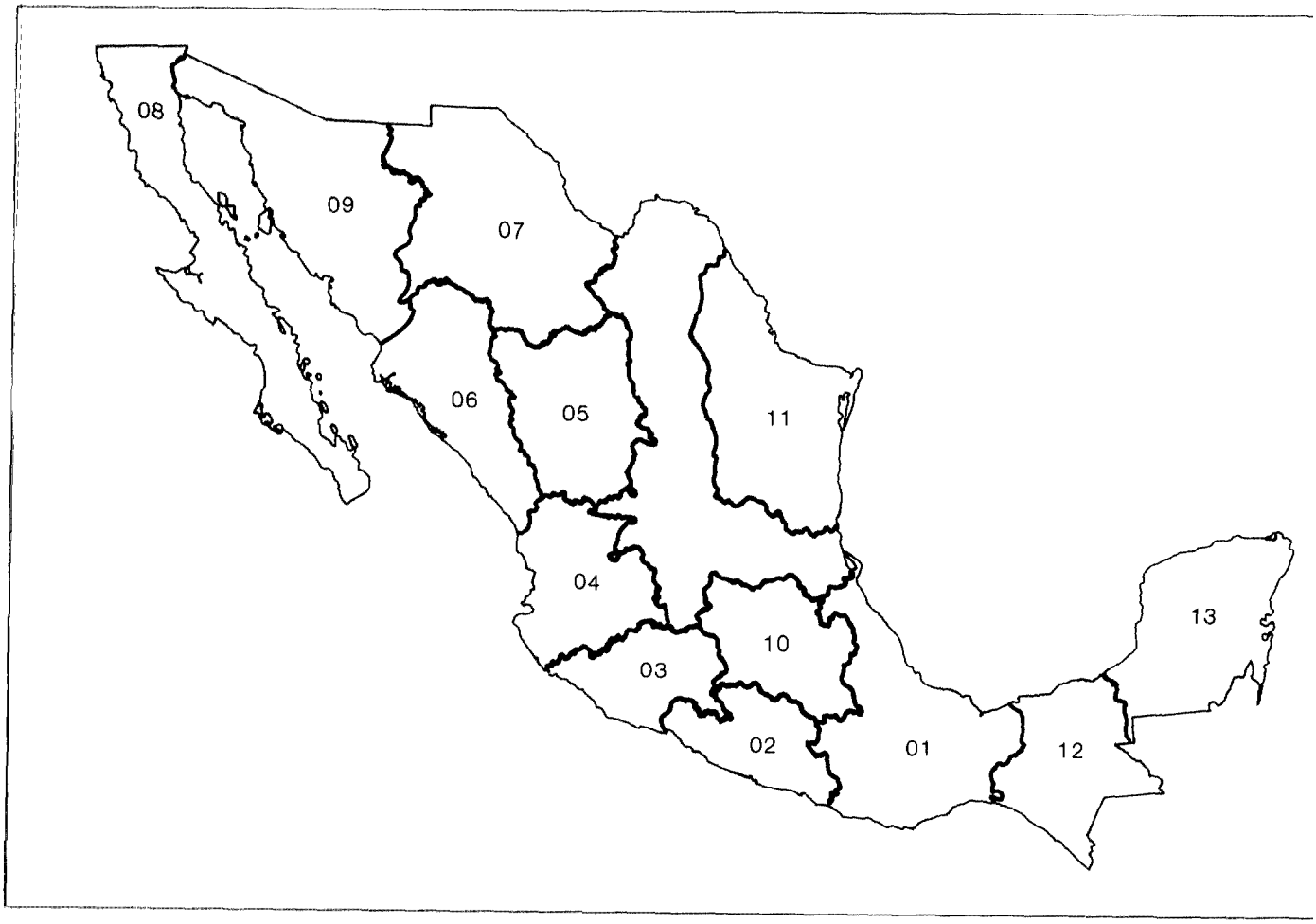
Table 4.1: Number of Hectares of Opium Poppy and Marijuana Eradicated and Number of Spray Missions, by Zone
(June 1986 Through Jan. 1987)

Zones	Number of missions	Hectares eradicated		
		Opium Poppy	Marijuana	Mixed
1	136	15	160	0
2	198	317	91	4
3	264	7	617	0.5
4	186	22	224	0.1
5	80	1	15	0
6	578	585	1,081	36
7	15	0	28	0
8	0	0	0	0
9	0	0	0	0
10	32	9	31	0
11	0	0	0	0
12	69	104	58	0
13	0	0	0	0

Source: NAU

U.S. officials reported that they were not permitted to take part in the nightly meetings held by the zone coordinators and military commanders to decide where the next day's spraying missions would occur. Without access to the criteria used to select eradication targets and without detailed cultivation statistics, the U.S. officials were unable to evaluate the PGR's decision to place less emphasis on zone 5 than on other areas; however, they did tell us that they had flown across a small section of zone 5 and had seen what appeared to be large opium poppy fields.

Figure 4.1: PGR Zones



Annual Eradication Goals

We found that the NAU and PGR had not established mutually accepta annual eradication targets and we discussed this situation with the l ambassador in March 1987. In a March 30, 1987, internal policy guic ance document addressed to its narcotics control coordinators, INM advised that optimal crop control and eradication in Mexico could bc accomplished by, among other actions, "Developing measurable goal and objectives for the Letters of Agreement (LOAs) and monitoring p gram performance against the LOA requirements..."

INM requires NAUS in major narcotics producing or transiting countrie submit annual reports, including, where appropriate, estimates of th

maximum eradication achievable by their host governments. If the NAU and the host government estimates differ, NAUs are instructed to describe both estimates in their reports. In early 1987, the NAU estimated the maximum eradication achievable by the PGR in 1987 and advised INM that 7,200 hectares of marijuana and 4,160 hectares of opium poppy could be eradicated but this would require additional U.S. funding of approximately $11.7 million. The NAU made its estimate without consulting the PGR because earlier efforts to get the PGR to help set goals had failed. We were told that Mexico has declined to set a target of less than 100-percent destruction; however, such a goal is of little use in establishing year-to-year program requirements or measuring the impact of specific program inputs.

The NAU officials acknowledged the 1987 estimates were unrealistic in view of current operational inefficiencies and the still undetermined need for additional or different aircraft. Mexico's Deputy Attorney General termed NAU's 1987 goals unrealistic. He told us that improved maintenance and parts management could increase the PGR's performance by only 25 percent and that substantially increased eradication depended on significantly increased U.S. funding.

Verification Component

Eradication claims are based on visual observation by pilots and navigators or on calculations based on the amount of herbicides used during the spray missions. Calculations based on herbicide consumption tend to overstate the number of hectares eradicated unless allowances are made for those instances when pilots spray fields more than once to ensure total destruction. Estimates of eradication by PGR helicopters were based on visual observation and estimates of eradication by the Turbo Thrush aircraft, piloted by U.S. contract instructor pilots, were based on herbicide consumption. Not surprisingly, the accuracy of all estimates has been debated; some U.S. officials believed the visual estimates were too low and that PGR personnel understated eradication by the Turbo Thrushes because of the PGR's disagreement with INM about the appropriateness of that aircraft for Mexico.

The difficulty in estimating the extent of eradication accomplished in Mexico has been compounded by the Mexican army's claims of manual crop eradication. The army reportedly devoted over 25,000 troops to manual eradication campaigns and published impressive claims of its efforts; in 1986 it reportedly destroyed more than 6,000 hectares of opium poppy and 8,439 tons of marijuana. These claims exceeded INM's estimate of total cultivation of these narcotics in 1986. The army claims

have not been independently verified and the U.S. officials have not been allowed access to the army's eradication staging areas. The Dep ment of State stopped reporting the army's eradication claims; howe Department of State officials acknowledge that the military does era cate illegal cultivation but that just how much remains uncertain.

In an effort to provide more credibility for aerial eradication claims, negotiated with the PGR for bilateral reconnaissance and inspections. The resulting operation, called Vanguard by DEA, was carried out by PGR office outside the direction of the Deputy Attorney General, who commands the eradication program and the zone coordinators who assign the spray missions. DEA was given geographical coordinates of fields that the PGR eradicated and approximately 30 percent of the co dinates were chosen for verification overflights. PGR pilots and navig tors, with DEA observers, used fixed-wing aircraft to locate and verif eradicated fields. DEA reported the PGR's eradication claims were mor than 90 percent accurate. However, PGR and DEA personnel did not ha the helicopters for the onground observation needed to fully validate eradication activities.

According to information provided to us, it is extremely difficult to v ify crop destruction without some onground validation because

- the PGR's coordinates are not sufficiently precise to verify that an are which appears from the air to have been destroyed is the same area indicated on an eradication report;
- a cleared field observed during a verification flight is not necessarily destroyed field, it may have been a recently harvested crop, perhaps legal crop; and
- observers in fixed-wing aircraft cannot determine whether a field wa sprayed sufficiently early in the plants' growing cycle to preclude harvesting.

A U.S. official who visited Mexico and observed Operation Vanguard, wrote in May 1985 that:

"There is validity to the DEA point that it is very difficult to identify many field from the fixed-wing Cessnas used in the program, especially when fields are in e to mid-stages of growth, although the Cessnas are more suited to reconnaissance than to verification, especially to the extent that the latter requires on-ground c firmation of plant destruction. Obviously, the Cessnas do not permit the collectic of 'ground truth' information to supplement information gathered from the air."

U.S. officials advised us that they had repeatedly but unsuccessfully requested the PGR to provide a helicopter for validation purposes. The U.S. embassy expressed the view in May 1987 that, in addition to fixed wing aircraft, the verification effort needed two helicopters and two 4-wheel drive vehicles.

In its comments on our draft report, the Department of State reported that U.S. officials have proposed and are awaiting PGR approval to conduct demonstrations of two pieces of equipment which could improve the accuracy of eradication estimates—biovision and pathlink.

Evaluation Standards

Although INM advised NAU coordinators to review their programs annually, the NAU in Mexico had not instituted a pattern of annual self-evaluation and the eradication program was subjected to bilateral and independent evaluations of limited scope only sporadically. For example, the Defense Contract Audit Agency audited E-Systems overhead rates in 1982. The Department of State Inspector General's Office reviewed INM program management in 1984. The Defense Logistics Agency made a limited review of the maintenance operation in 1985.

At the time of our fieldwork, INM and the PGR had appointed members to a special bilateral team to evaluate the aviation program. The joint evaluation was a valuable effort to try to come to grips with program inefficiencies, but the team's March 1987 report contained neither conclusion nor recommendations. INM subsequently hired a consulting firm to analyze the evaluation team, Evergreen and NAU reports, and an operations plan developed by the U.S. embassy and to provide recommendations for improving the aerial eradication program. The firm's report was completed on October 28, 1987, and contained recommendations and a model for an air operations plan which will be studied by the Department of State.

We noted the lack of evaluation criteria in our earlier reviews of the program and recommended that the Department of State improve planning, monitoring, and evaluation.

The Department of State, in its comments on our draft report, noted that in fiscal year 1988 U.S. embassies will be required to prepare operating plans for both current and prior-year projects. INM is developing a performance monitoring and reporting system based on project objectives, targets, milestones, and performance measures. The agency hopes the new process will provide U.S. officials with a framework for tracking

and evaluating program progress as well as financial obligations and expenditures.

Formal Agreement on All Program Elements May Be Difficult to Achieve

A fundamental impediment to program success is the widely held Me can perception that the availability of heroin and marijuana in the United States is a U.S. problem and not a Mexican problem, caused b increased U.S. demand and not by Mexican supply. NAU officials believed that this perception greatly affects Mexico's willingness to c mit increasingly scarce resources to a program seen as primarily ben ing the United States. In addition, Mexican officials speak of the eradication program as a unilateral effort and resent U.S. efforts to influence program activities. According to several U.S. officials, program success depends on continued high-level diplomatic initiatives t convince Mexico that the program has mutual benefits and that long-standing program inefficiencies should be addressed and resolved.

Because the bilateral program may serve different purposes for the United States and Mexico, it is important that those points which car agreed on are clearly stated in program documents. Mexico will elect new President in 1988 and the change in administrations could result major personnel changes in eradication program administration. In v of this potentially abrupt and pervasive change in players, agreemen should be formalized to ensure that program understandings and init tives have long-term continuity.

In commenting on our draft report, the State Department said that bc governments have agreed to negotiate a Letter of Agreement which v detail the contributions and expectations of both governments with respect to aircraft maintenance and the 1988 contract. Failure to com plete these negotiations will cause the Department to reevaluate not only the contract but also the entire bilateral program. The Departme noted that negotiations on other issues may be delayed by personnel changes in the PGR, which could begin as soon as spring 1988.

Congress Requires Annual Review of Narcotics Control Efforts

Bilateral agreement on goals and standards has also become more cri cal in view of recent U.S. legislation requiring the President to deterr and certify the narcotics control efforts of major illicit drug producin and trafficking countries. To convince foreign governments to contro illicit narcotics, the Congress linked the cooperation of major drug pr ducing and trafficking countries to U.S. and multilateral foreign assistance.

Section 2005 of the Anti-Drug Abuse Act of 1986 further amended the Foreign Assistance Act of 1961 to require withholding the obligation or expenditure of half the U.S. foreign assistance allocated to any major illicit drug producing or drug transit country. U.S. executive directors o multilateral development banks will be instructed to vote against any loan to or funds for such a country. However, these restrictions will not apply if the President determines that the country either has fully coop erated with the United States or has taken adequate steps on its own to control illicit narcotics. The President may also allocate all of the funds if he certifies that the "vital national interests" of the United States require such assistance. On March 1, 1987, the Congress was informed that the President had certified that Mexico's narcotics control efforts met the standards established by this law.

U.S. Ambassador Seeks Bilateral Agreement

The U.S. ambassador has a crucial role in setting the stage for constructive discussions between INM, NAU, DEA, and the PGR to address program inefficiencies. Prior to our field trip to Mexico, the ambassador had an operations plan drafted for the eradication program. Although INM had issued policy and program guidance for the program, it had not approved a detailed operating plan to address the many problems noted in NAU and INM status and monitoring reports. The U.S. embassy's final plan, dated May 15, 1987, was distributed to INM and the PGR for review. It addressed many of the issues we had discussed with the ambassador at the conclusion of our trip to Mexico in mid-March 1987 as well as issues raised by INM in its March 30, 1987, narcotics control policy statement. The plan emphasized the need to improve aviation management and discussed aerial surveys, verification, choice and application of herbicides, and aircraft deployment. It discussed upgrading existing aircraft and purchasing additional aircraft based on evaluations of current air fleet capabilities.

The embassy plan did not promote adoption of its specific recommendations but provided them as a starting point for bilateral discussions. As the plan stated, "the main issue is taking action to improve the overall effort". However, we also believe that to resolve these long-standing issues and to have lasting effect, the corrective actions agreed to by the United States and Mexico should be integrated into the formal agreements supporting the program.

Conclusions and Recommendations

Conclusions

Mexico remains a primary source for the heroin and marijuana consumed in the United States, and program statistics indicate that the availability of Mexican heroin and marijuana is increasing. Despite years of eradication activity and significant bilateral funding, the ae eradication program has not kept pace with cultivation and, during t past 2 years, it eradicated less than 40 percent of the estimated total cultivation of opium poppy and marijuana. In addition, growers hav not abandoned traditional growing areas, providing the frustrating a costly prospect of endlessly spraying the same growing regions seas after season.

It is clear that simply maintaining aerial eradication at current level will not eliminate Mexico as a major source of heroin and marijuana. Without improved eradication results, the gap between cultivation a eradication probably will expand further.

Our review showed that the PGR did not use aircraft as often as U.S. officials believed was reasonable and the limited usage reduced erad tion. We found numerous operational deficiencies which contributed toward low usage. Foremost was a low rate of aircraft availability d to excessive maintenance turnaround time. The PGR, U.S., and E-Syst officials disagreed as to the causes of the delays, and available infor tion indicates that the lines of authority for maintenance scheduling inventory procurement, storage, and distribution need clarification. terms of the present maintenance services contract appear inadequa to ensure optimal aircraft availability and there is a need for clearer delineation of contractor and PGR responsibilities. The contractor sh be given sufficient authority to achieve any performance standards which it will be held financially accountable. The next maintenance vices contract should include provisions which would define the con tractor's responsibility and authority for procurement, distribution, security for the spare parts inventory. We also noted a need for improved coordination between PGR operational and maintenance components.

In addition to these operational problems, we found that the knowle of the extent and location of illegal cultivation in Mexico is incomple eradication estimates are questionable, the verification program is in equate, mutual performance standards have not been set, and evalu tions and independent audits are made infrequently.

Formal agreements between the United States and Mexico should pr vide an adequate framework for correcting these problems but they

not do so. The United States and Mexico should reexamine the lengthy series of agreements underlying this program, weed out those conditions no longer appropriate, and reaffirm and implement those which are worthwhile. At a minimum, the agreements should focus on (1) comprehensive surveys of the Mexican cultivation base, (2) annual eradication goals, consistent with reasonable standards for aircraft use and availability, and (3) a system for validating and evaluating program accomplishments.

Aviation data supplied by the PGR indicated that the current air fleet can achieve greater eradication if necessary steps are taken to improve program management. However, the magnitude of the problem suggests that operational improvements alone may be insufficient to achieve optimal crop control and that additional resources may be needed. But the United States should refrain from providing additional aircraft for the program until, at a minimum, the Department of State has estimated (1) the extent of eradication the PGR could accomplish if its existing air fleet was used in accordance with acceptable standards and (2) the number and type of additional aircraft, if any, the PGR will need to achieve complete crop control. Ideally, such an analysis should be made in concert with PGR officials.

Many of the problems we noted during our review are not new. In our 1977 and 1979 reports, we noted the need for realistic program goals and action plans to be used as the basis for funding commitments and evaluating program progress. Because the program has not been able to develop bilateral goals or standards on an informal basis, the program's formal bilateral agreements should be amended to establish consensus on these important issues.

Recommendations

We recommend that the Secretary of State instruct the Assistant Secretary for International Narcotics Matters to negotiate with the government of Mexico to revise the formal agreements which form the framework of the bilateral program, to include provisions for (1) developing comprehensive aerial surveys to identify the extent and location of opium poppy and marijuana cultivation, (2) setting annual eradication goals consistent with reasonable standards for aircraft use and availability, and (3) validating and evaluating the program's activities and progress.

To avoid the problems which developed because the current maintenance services contract does not clearly define the responsibilities of the

PGR and the contractor, we also recommend that the Assistant Secret for International Narcotics Matters negotiate with the government o Mexico to define the scope of the next contractor's responsibilities a financial accountability for (1) determining maintenance requiremen and maintaining spare parts inventories which are reasonable in rela to the distance of the program from its major suppliers and to the mi sion and deployment of the air fleet, (2) procuring spare parts and repairs and distributing spare parts, and (3) security of on-hand inv tories. Once the contractor's responsibilities and liabilities have been established, the contract should ensure that the contractor is provid with sufficient authority to fulfill its obligations.

In addition, we recommend that the Secretary of State not request fu ing to purchase aircraft for the program in Mexico unless the Assista Secretary for International Narcotics Matters has determined (1) the extent of eradication which the PGR could accomplish if it uses its existing air fleet in accordance with reasonable standards for use an availability and (2) the number and type of additional aircraft, if an which the PGR needs to achieve complete crop control.

Agency Comments

We provided drafts of this report to the Departments of State and Ju tice for review and comment. The Department of State agreed with o recommendations. The Department of Justice chose not to comment, deferring to the Department of State. The agency responses to our request for official comments are included in the appendixes I and II.

The Department of State was in complete accord with our recommen tion that it negotiate with the government of Mexico to revise the for agreements which govern the bilateral program in the areas of aerial surveys, annual eradication goals, and program evaluation. The Dep ment noted that the PGR has agreed to negotiate a more comprehensi Letter of Agreement for the 1988 maintenance services contract.

With respect to our recommendation that the next maintenance servi contract clearly delineate the responsibilities and authority of the co tractor, the Department of State reported that the scope of work it n tiated with the PGR will more clearly delineate contractor and PGR responsibilities, although not in the manner which the Department of State would have preferred. The contract will require the contractor procure parts in a timely manner and to use a computer system to m age procurement.

The Department of State was also in full accord with our recommendation that no additional aircraft purchased with U.S. funds should be pro vided for use in Mexico until the capabilities of the present fleet had been fully evaluated. The Department reported that the NAU is planning to prepare such evaluations to determine whether additional aircraft ar needed.

The Department also provided additional and updated information on a number of issues, which we included throughout the report.

Comments From the Department of State

United States Department of State

Comptroller

Washington, D.C. 20520

November 5, 1987

Dear Mr. Conahan:

I am replying to your letter of October 8, 1987 to the Secretary which forwarded copies of the draft report entitled "Drug Control: U.S.-Mexico Opium Poppy and Marijuana Aerial Eradication Program" for review and comment.

Enclosed are the Department's comments which were prepared in the Bureau of International Narcotics Matters.

We appreciate the opportunity to review and comment on the draft report.

Sincerely,

Roger B. Feldman

Roger B. Feldman

Enclosure:
As stated.

Mr. Frank C. Conahan
Assistant Comptroller General
National Security and
International Affairs Division
U.S. General Accounting Office
Washington, D.C. 20548

GAO DRAFT REPORT: DRUG CONTROL - U.S. MEXICO OPIUM POPPY AND MARIJUANA AERIAL ERADICATION PROGRAM

The draft report of the General Accounting Office has underscored and elaborated on the conclusion reached in the State Department's March 1987 International Narcotics Control Strategy Report that inefficiencies in the bilateral aerial eradication effort remain. The GAO correctly points out that "it is likely that the gap between cultivation and eradication will widen unless the program is improved." Therefore, as the Department stated in testimony before the Select Committee on Narcotics Abuse and Control of the House of Representatives on August 5 of this year, joint United States - Government of Mexico efforts are being made to remedy program deficiencies and establish a basis for an ever more successful program.

The comments of the Department of State on the GAO report will focus first on the recommendations, including substantive portions of the report that relate most specifically to the recommendations. Additional comments keyed to other issues in the report are also included.

The Department of State is in agreement with the thrust of the recommendations contained in the GAO report. To improve the effectiveness of the eradication program in Mexico, the U.S., acting jointly with the Government of Mexico, has taken a variety of actions over the past two years. A comprehensive reporting system on eradication data and aircraft utilization, as well as a computerized tracking of spare parts procurement was instituted. An improved spray strategy was adopted and a joint training center with regularly scheduled refresher courses for pilots established. An aviation advisor and an aviation maintenance advisor were added to the Embassy staff in 1986.

In early 1987 the Department began implementation of additional actions which will address the issues identified in the GAO report. INM has sponsored a series of evaluations of the aerial spray program and of aviation maintenance requirements for the Mexico program. In addition, the Embassy in Mexico City drew up a revised strategy for narcotics control during the same time frame. Evaluations of all of these reports have now been concluded and the final report is to be passed to the Embassy with the Department's comments shortly. These studies were designed to form the basis for more efficient efforts to improve the Mexico program.

The Department of State is in complete accord with the first GAO recommendation that the Assistant Secretary for International Narcotics Matters negotiate with the Government of Mexico revised formal agreements to govern the bilateral program in the areas of aerial surveys, annual eradication goals and program evaluation. In this context, the State

Department and the PGR have agreed to negotiate a new Letter of Agreement associated with the 1988 aircraft maintenance contract. The Embassy has finished a draft and negotiations are expected to begin shortly. The U.S. proposal will detail the contributions and expectations of both governments with respect to aircraft maintenance. The Department has set a March 1 deadline to complete the negotiations. If agreement has not been reached by that date, the U.S. will reevaluate the RFP as well as the bilateral narcotics control program.

The Department intends to negotiate LOAs for other aspects of the bilateral program including aerial surveys and various forms of field support. Nevertheless, it must be noted that the current Mexican administration will leave office in 1988. The top officials in the Mexican Attorney General's office could depart as early as this spring. Their temporary replacements could be reluctant or unable to negotiate new bilateral agreements which will commit the next administration. Thus, it may be necessary to wait until the next administration enters office to negotiate additional comprehensive LOAs.

Concerning the second recommendation that the Department negotiate with the Government of Mexico to assign responsibility for (1) determining maintenance requirements, (2) procuring and distributing spare parts, and (3) ensuring physical security of on-hand inventories, we have already taken action. In October 1987, U.S. officials completed negotiations for a new request for proposal (RFP) for the 1988 aircraft maintenance contract; the RFP now under review by the Government of Mexico. The current Mexican administration has rejected all USG proposals to give the contractor a managerial/supervisory role or any responsibility for inventory control. Regardless of the terms of the contract, only the PGR through its contractor can assure proper maintenance and availability of the fleet. The RFP clearly delineates the responsibilities of the contractor and the PGR, however. It establishes distinct lines of authority in aircraft maintenance, with PGR acceptance of total responsibility for fleet maintenance. The RFP gives the contractor wide scope to advise the PGR about these functions. The contractor is responsible for procuring needed parts in a timely fashion. The RFP also requires the new contractor to use a computer to manage parts procurement. The PGR has assured the NAU that it is installing a computerized inventory control system. The State Department will continue to encourage the PGR to require of the contractor broad assistance in the areas of management, planning, scheduling, and organization. At some future point, it may be possible to persuade the PGR that a U.S. Government technical assistance contract would work to the advantage of the Governments of both Mexico and the United States.

Likewise, with regard to the third GAO recommendation, the State Department is in full accord that no additional aircraft purchased with U.S. funds should be provided for use in Mexico unless the Department of State has determined (1) the eradication capability of the present air fleet if used in accordance with reasonable standards for use and availability, and (2) the number and type of additional aircraft needed for total narcotics crop control. The NAU is planning to prepare these evaluations in order to determine if additional aircraft are needed. In accordance with Section 484 of the Foreign Assistance Act of 1961, as amended, any aircraft provided in the future would be provided only on a loan basis.

The Department believes that these actions as well as others mentioned below will improve the Mexico narcotics control program and increase the hectarage of drug crops eradicated. Nevertheless, while aerial eradication is a keystone of the U.S. International Narcotics Control strategy as well as the focal point of the drug control effort in Mexico, it is not the only component of a comprehensive and integrated strategy to attack the narcotics problem. Aerial eradication alone cannot stop the flow of drugs from Mexico to the U.S. More successful efforts to destroy narcotic trafficking organizations and interdict drug shipments are essential if Mexico is to become a less significant supplier of illegal drugs. Moreover, without reduced demand within the United States, increased success in reducing the flow from one country can only lead to incipient production and trafficking in new countries.

The following are substantive remarks covering other parts of the GAO report:

Now on p. 2.

See p. 18.

Current Eradication Effort: In the Executive Summary on page 1, the GAO draft report comments that the Mexico program was considered successful several years ago but that eradication has not kept pace with cultivation. While that statement is correct, the eradication statistics below demonstrate that the PGR has sprayed an ever larger number of hectares of drug crops each year since 1978.

HECTARES OF PLANTS ERADICATED:

	1977	1978	1979	1980	1981
Poppy/marijuana	11,900	2490	665	1180	975
	1982	1983	1984	1985	1986
Poppy/marijuana	1486	2978	2024	4000	5356

Source: Attorney General's Office of Mexico (PGR)

Now on p. 19.

Of course, the PGR has more equipment available to conduct eradication missions. Chapter 2 (see e.g., page 26) does not sufficiently address the difficult nature of the PGR's drug eradication mission, however. Drugs are being grown throughout Mexico and farmers have taken effective measures to limit the possibility of their crops being eradicated. The increase in the cultivation of drug crops can be attributed to a variety of factors, including: a declining economic situation encouraging farmers to turn to illicit crops; a resultant growth in corruption; favorable weather conditions; and more sophisticated cultivation techniques such as smaller more inaccessible plots, camouflage and irrigation. Rising consumer demand for marijuana also played a role. The PGR has responded to the spread of the problem by disbursing its aircraft fleet and support services over a much larger geographic area. As a result, the logistics of coordinating the eradication effort, including aircraft maintenance, are more complex than in the 1970's. These factors have contributed to a reduction in the effectiveness of the eradication campaign.

Now on p. 2.

Program Cost: On page one of the Executive Summary, it is not clear that the $118 million cost of the program from 1984-1987 is the cost for both the United States and Mexico.

Now on p. 35.

Aerial Surveys: With regard to the inadequate information on drug crop cultivation in Mexico (page 3 of Executive Summary), INM has been working with the PGR since mid-1985 to develop an aerial survey project to assess narcotics cultivation. Due to procedural and technological problems, there have been the delays mentioned on page 57 of Chapter 4 in supplying the PGR with their own aerial survey capability. Meanwhile, as noted on page 56 of the GAO report, limited surveys by a private firm have been flown in Zones 2 and 6 to demonstrate the feasibility and utility of aerial surveys. Another is proposed for the fall of 1987. Nevertheless, the arrangement and approval of aerial surveys in Mexico is time-consuming. Under Mexican Law, approval for aerial surveys is the responsibility of the National Institute of Statistics, Geography and Information (INEGI) and each survey must be individually approved.

Now on p. 40.

Verification: In order to address the disagreement on the accuracy of eradication estimates mentioned on page 61 of Chapter 4, U.S. officials have proposed and are awaiting PGR approval to conduct demonstrations of two pieces of equipment that have the potential for evaluating eradication and verification programs (bio-vision and pathlink). Biovision has been demonstrated under laboratory conditions but has yet to be used under field conditions to confirm opium poppy and marijuana eradication.

Now on p. 16.

1986 Estimates of Imported Marijuana: As noted in Chapter 2, page 25, the 1986 National Narcotics Intelligence Consumers

Committee estimate of Mexican imported marijuana at 3-4,000 metric tons is lower than the Department of State estimate of 4-6,000 metric tons. The other estimates, however, are not radically different. The gross NNICC all-source estimate is 13,400 metric tons; the State foreign source estimate is 13,405 metric tons. Subtracting for losses and seizures, the NNICC estimate is that 7,300 metric tons were available -- or, 9,300 metric tons before deducting U.S. seizures of 2,000 metric tons. The State estimate, deducting for seizures and exclusive of domestic production, is actually higher for total import availability: 11,405 metric tons vs. 9,300 metric tons. The difference is primarily in the allocation of Mexican marijuana:

	STATE	NNICC (In Metric Tons)	DIFFERENCE
Mexico	6,000	4,000	-2,000
Colombia	3,630	3,900	+ 270
Jamaica	2,025	1,700	- 325
Belize	550	500	- 50
Other	1,200	1,200	+ 0
Total	13,405	11,300	+2,105

The Department of State considers its country estimates more reliable because the data are derived primarily from aerial surveys. There are, however, no survey data on marijuana cultivation in Mexico; the State Department relied on random reports from Mexico, which were higher than the NNICC figure, which is an extrapolation of seizure data.

Now on p. 22.

Request for Proposal for 1988 Aircraft Maintenance Contract: The statement on page 36 that the U.S. Embassy attempted to convince the PGR to accept a U.S. administered contract is inaccurate. In fact, the U.S. requested, and the PGR declined, a U.S. Government contract which would have been administered by both the PGR and the NAU.

Now on p. 3.
Now on p. 28.

Pilot Salaries and Retention: The low salaries mentioned on pages 4 and 44-45 are not the only reason the PGR has lost experienced pilots. At least six pilots died in 1987 in work-related actions. Several pilots have also resigned as a result of family pressure to find less dangerous work. Nevertheless, it is clear that the PGR cannot compete with the private sector in terms of pilots' salaries. It has, however, attempted to close the gap to reduce the loss of experienced pilots. Effective September 1, the PGR raised by 30 percent the salaries of employees involved in the fall eradication campaign. Salaries of eradication pilots were increased by 50 percent. Overall PGR employees have received salary increases of about 90 percent in the past 12 months. In the current period of 100 percent plus inflation, declining real wages is the reality for most Mexicans. The PGR has also bolstered the pilots' benefits package including higher life insurance. In addition, the PGR is considering other non-salary benefits.

INM and the PGR have also agreed to initiate a new joint pilot training program to rebuild the PGR pilot corps. INM is arranging for the contracting of nine instructor pilots for a 90 day period to teach spraying procedure to PGR helicopter pilots and to train new helicopter pilots to replace those that have become eradication pilots. The PGR has taken steps to assure that new pilots remain with the eradication program. Pilots that leave before two years must pay for their training. Also, their licenses will be restricted so that they cannot work for commercial enterprises.

Now on p. 24.

Aircraft Availability Rates: With regard to the critique on page 33 of Chapter 3, the PGR has stated that a rate of availability for aircraft of 90 or even 80 percent is too high to expect. They argue that availability rates for the US Armed Forces helicopter fleets are around 60 percent and that PGR operations are more comparable to a military operation than to a civilian helicopter operation. U.S. officials believe that an 80 percent rate could be achieved under optimal conditions and attribute the less-than-satisfactory PGR performance to its less efficient maintenance and inspection procedures. Longer downtime for maintenance is due in part to the strict Mexican Civil Aviation Administration (DGCA) requirements for aircraft inspections. Like the FAA, the DGCA requires the PGR to inspect its aircraft after every 100 hours of flight. The DGCA also requires a 1200 hour inspection in which the aircraft must be completely disassembled. All bolts must be replaced, keeping the plane on the ground for at least 30 days. This bolt replacement requirement was rescinded by the DGCA in mid 1987. The PGR also overdisassembles its aircraft during major inspections. This contributes to downtime and excessive parts consumption.

Now on p. 30.

Underutilization and Availability of Aircraft: With regard to the suggestion on page 49 that the NAU develop a standard for allocating aviation tasks, it must be remembered that the narcotics control program in Mexico is a Mexican program. While the NAU can, and does, work with the PGR and make suggestions, the NAU cannot establish a standard for the allocation of PGR aircraft.

Now on p. 31.

In a similar fashion, U.S. officials could offer the PGR considerable material and comment on which type of additional aircraft to acquire in 1987 (see page 51). However, because PGR officials state that these aircraft were purchased with PGR funds, they do not believe that the decision was appropriate for a bilateral agreement.

Maintenance/Inventory Problems: Concerning the issue of maintenance as a cause of poor performance as described on page 35, in 1982 the aircraft maintenance contractor, Serv-Air, a subsidiary of E-Systems, Inc., advised the PGR to alter its

inspection system. It recommended that the PGR switch from progressive inspections to hourly inspections. Under the progressive method, aircraft are inspected continually and are usually available for missions. Under the hourly method, the aircraft are grounded and the entire inspection is done at once. The hourly system requires grounding aircraft to complete the inspection rather than progressively inspecting them in the field. The contractor recommended the hourly inspection system because PGR mechanics were not fulfilling the requirements of progressive inspections and the aircraft were returning for major inspections in bad condition. Although the system was changed, aircraft continue to return to Mexico City for major inspections in bad condition. Aircraft availability rates were much higher under the progressive system than under the present one, however. NAU has recommended to the PGR that it discuss this situation with the new contractor to determine which inspection system may work best.

Now on p. 25.

Excess Inventory: It should be noted that the PGR's excess inventory described on page 35 has accumulated over 12 years. U.S. officials are encouraging the PGR to dispose of those parts which cannot be used and to create a better distribution system so that parts in the inventory are available where needed and are used before their shelf life expires. The new aircraft maintenance contract will provide for the contractor to dispose of excess inventory at the PGR's request.

Now on p. 40.

Evaluation Standards: On page 64 of Chapter 4 it is correctly stated that the NAU in Mexico had not instituted a pattern of annual self-evaluation. INM is establishing a performance monitoring and reporting system in FY 1988. Each Embassy will be required to prepare project-based operating plans for both current projects and for prior year projects based on pipeline funds. Objectives, targets of performance, milestones of activity and measures of effectiveness are to be included. This process will provide U.S. officials with a framework or plan for tracking and evaluating program progress as well as financial obligations and expenditures.

We appreciate this opportunity to comment on this draft report. Should you have any further questions, please feel free to contact us.

Ann B. Wrobleski

Ann B. Wrobleski
Assistant Secretary
Bureau of International Narcotics
Matters

Comments From the Department of Justice

U.S. Department of Justice

Washington, D.C. 20530

November 25, 1987

Mr. William J. Anderson
Assistant Comptroller General
General Government Division
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Anderson:

We appreciate the opportunity given the Department to review and provide observations on your draft report entitled "Drug Control: U.S.--Mexico Opium Poppy and Marijuana Aerial Eradication Program."

Our review of the report discloses that the matters discussed relate to the administration of the Narcotics Crop Eradication Program in Mexico, and that overall responsibility for these matters falls under the purview of the Department of State. Accordingly, we defer to the State Department for any comments on the report.

Please accept our apologies for the delay in sending this response to you.

Sincerely,

Harry H. Flickinger
Assistant Attorney General
for Administration

*U.S. G.P.O. 1988-201-749:60

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