

## SUMMARY

Despite a doubling of Federal expenditures on interdiction over the past 5 years, the quantity of drugs smuggled into the United States is greater than ever. Illegal imports of cocaine, the drug now of intense national concern, have about doubled since 1981, supplying a growing number of users at prices that have fallen as the supply has increased.

The challenge faced by drug enforcement agencies is formidable. OTA estimates that U.S. retail sales of marijuana, cocaine, and heroin totaled about \$50 billion in 1985. A survey taken at that time indicated that 18.2 million Americans used marijuana once or more a month and 5.8 million were monthly users of cocaine. Overall, 10 percent of the population over age 12 were found to be monthly users of marijuana and 3 percent monthly users of cocaine. Other data indicate that 500,000 persons in this country use heroin regularly.<sup>1</sup>

The large market, coupled with the huge profits to be made by transporting drugs from foreign suppliers to domestic wholesalers, fuels this illegal traffic. OTA estimates that the mark-up between foreign and domestic wholesale prices is on the order of 20 to 30 times for marijuana, 4 to 5 for cocaine, and 30 to 40 for heroin. In 1985, the value added to the product through smuggling was roughly \$6 billion for marijuana, \$1.6 billion for cocaine, and \$1 billion for heroin. Of this, perhaps 90 percent (over \$7 billion) was realized as profit by drug smugglers.

The drug traffic moves by a great variety of transport modes and routes to reach the United States. Most imported marijuana comes either by sea in private vessels or by land across the Mexican border, but private aircraft and commercial

<sup>1</sup>The number of regular marijuana users and heroin addicts has been reported in the annual Narcotics Intelligence Estimate published by DEA and in the most recent (June 1986) DEA Special Report, "Worldwide Drug Assessment. Estimates of heroin addicts are based on a 1981 survey. Marijuana usage is based on 1982 and 1985 NIDA "Household Surveys." The 1985 National Household Survey on Drug Abuse published by the National Institute on Drug Abuse puts the number of regular cocaine users at about 5,800,000. Total U.S. consumption of cocaine appears to have increased 20 to 30 percent from 1982 to 1986. Some researchers believe that the number of users may not be growing as much as the incidence of very heavy usage. In addition, the 1985 University of Michigan survey of high school students states that cocaine use by high school seniors was at an all time high (17 percent have tried cocaine) and that this would indicate increased use among that group in the future. Highlights of the 1985 Household Survey are appended to this report.

### WHAT IS INTERDICTION?

In this study, interdiction refers to efforts to intercept and deter the shipment of illegal drugs (chiefly marijuana, cocaine, and heroin) from foreign countries to the United States. It does not include actions in foreign countries to reduce cultivation or to disrupt criminal organizations responsible for processing and shipment. Neither does it include actions to pursue and to neutralize drug trafficking organizations and distribution networks within the United States, although all these actions are part of the overall national strategy to combat drug use. Interdiction focuses on drugs in transit to the U.S. border, including both those shipments concealed in legitimate commerce that seek to pass through ports of entry and those that attempt to penetrate the border surreptitiously in private aircraft, boats, and land vehicles or carried by persons on foot.



Photo credit: U.S. Coast Guard

transport are also used. Cocaine is smuggled across all three coasts and the Mexican border, with about half the traffic carried in private aircraft and a large share of the remainder in private vessels. The amount of cocaine smuggled through ports of entry appears to be increasing. The heroin produced in Southeast and Southwest Asia is primarily carried by airline passengers through ports of entry or hidden in cargo or mail. An increasing amount of Mexican heroin enters across the land border. Smugglers show great ingenuity in devising methods of entry. When interdiction efforts restrict a particular mode of transport or route, drug traffickers quickly shift to alternatives. As a result, the Nation's long and highly permeable borders are being assaulted by an illegal traffic that uses all conceivable means of transport and concealment.

The agencies with primary responsibility for drug interdiction are the Customs Service and the Coast Guard. The Customs Service is charged with combating smuggling by private aircraft, by private vessels in near-shore waters, and by all modes at ports of entry. The Coast Guard shares responsibility with Customs for interdiction of seaborne drug traffic near shore and conducts patrols along the entire U.S. coastline and in the open ocean, focusing on the Gulf of Mexico and the Caribbean Sea. Along the Mexican border between ports of entry, the Border Patrol of the Immigration and Naturalization Service exercises enforcement effort as an adjunct to its primary mission of preventing illegal immigration.

These front-line agencies, supported by numerous other Federal agencies, have seized increasing quantities of drugs over the past 5 years. In fiscal year 1986, almost \$800 million was expended by the Federal Government in this effort. Despite these efforts only a small percentage of drugs are being seized and the flow of drugs into this country has not yet been stemmed. (Seizure rates vary according to the particular drug, the season of the year, locale, and mode of transport.)

The Anti-Drug Abuse Act of 1986 (Public Law 99-570) affirms the role of interdiction as an important element in drug law enforcement. The act authorizes a substantial increase in funding for interdiction resources and personnel and greater use of military assets. It also sets the stage for resolv-

ing some of the fragmentation in organization and responsibilities for drug interdiction (e. g., between Coast Guard and Customs). It establishes mechanisms for allocating new military equipment and the requirement for legislative proposals from the President by mid-1987 to reorganize executive branch efforts to combat drug trafficking and abuse.

The goal of the Nation's overall anti-drug abuse program is to reduce the number of users and prevent others from becoming users. The national strategy includes many elements of both supply and demand reduction. Interdiction is only one element of supply reduction, which also includes investigation and prosecution, and international narcotics control. While many debate the relative merits of each of these elements, most agree that some level of effort in each is necessary.

Central to the success of future drug interdiction efforts are the technologies employed to detect, intercept, and capture smugglers. This study investigates the availability, use, and performance of the technologies now used for this and others that could contribute to the Nation's effort to prevent illegal drug traffic. Understanding the present contribution and potential improvement of these technologies involves not only examination of the technologies themselves but also the organizations that use these systems and the enforcement strategies they employ.



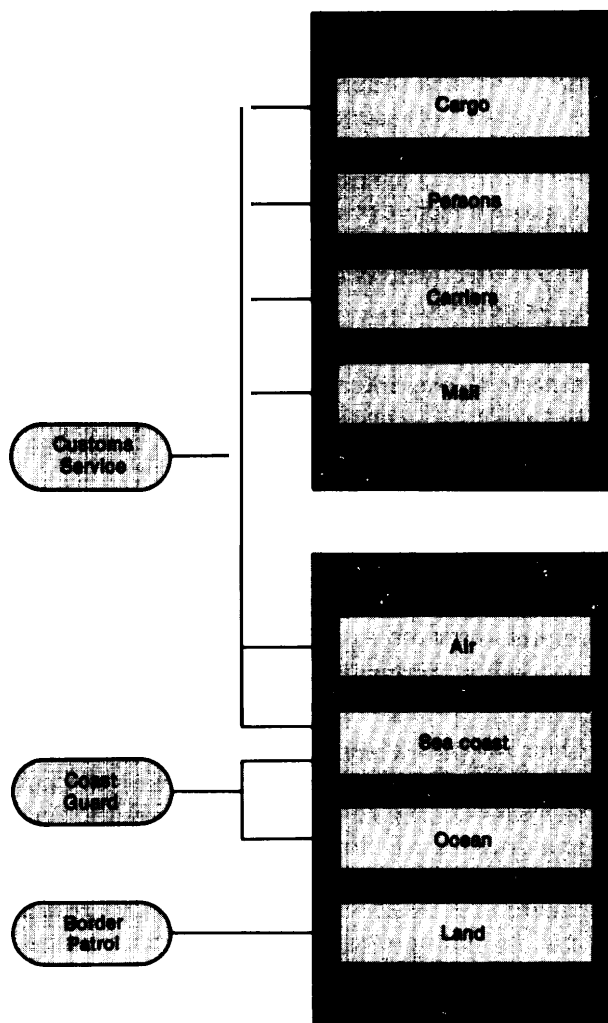
Photo credit: Border Patrol

The Border Patrol has recently been given authority to perform drug interdiction along the 2,000-mile Mexican border but law enforcement coverage is sparse.

### Key Findings

1. Despite increasing Federal expenditures for interdiction, illegal drug imports appear to be increasing. There is no clear correlation between the level of expenditures or effort devoted to interdiction and the long-term availability of illegally imported drugs in the domestic market. However, given the profitability of drug smuggling, a worldwide glut of drugs, and the view that the United States is the favored market for drugs, interdiction alone will probably never result in more than a short-term or relatively small reduction in drug availability.
2. OTA found the Federal agencies charged with the responsibility of drug interdiction to be staffed by dedicated and vigorous personnel who demonstrate courage and imagination in carrying out their responsibilities. For the most part, however, they have had to operate with very limited technological resources. The size, scope, and diversity of the smuggling challenge is enormous compared to the human and equipment resources that front-line enforcement agencies can bring to bear.
3. Data on drug smuggling, the trafficking system, and interdiction activities are inadequate for effective planning and management. Such data are needed to make informed selection of best strategies, to allocate enforcement resources, and to guide the design and management of interdiction programs. Measures of effectiveness for interdiction are difficult to define precisely. The numbers and quantities of drug seizures are difficult to interpret without good knowledge about smuggling attempts. Often, intelligence reports provide the best information on the effect of interdiction efforts on smuggling activity.
4. Responsibilities of the Federal drug interdiction agencies are fragmented and overlapping. The lack of a suitable institutional framework is a major impediment to the adoption and effective use of technologies, particularly command and control systems that could offer significant benefits. With the exception of special intensive operations, problems with interagency coordination and cooperation occur and no central authority addresses important strategic questions on priorities and resource allocation.

### Roles of Drug Interdiction Agencies



SOURCE: Office of Technology Assessment, 1987.



Photo credit: U.S. Customs Service

5. Lack of an overall direction that would establish a comprehensive approach to planning and operations, limits the effectiveness of interdiction programs. Improved direction could enable:
  - enforcement resources to be allocated to the highest priority problems;
  - the various agencies to design and carry out more effective coordinated interdiction strategies; and
  - the effectiveness of interdiction programs to be evaluated.
6. The value of intelligence is very high for all aspects of drug interdiction. In particular, good tactical intelligence can mean a large increase in ability to identify smuggling attempts. In certain areas, intelligence gathering is limited by inadequate resources and an ineffective network. Needed information cannot be gathered and delivered to the users in a timely fashion. Classified intelligence, even if valuable to interdiction efforts, is not often or easily used because of concerns about revealing sources and methods during court proceedings.
7. Over the past 2 years many new technologies, ranging from remote sensors to pursuit aircraft and patrol boats, have been introduced into Federal drug interdiction programs. These technologies have, for the most part, enhanced Federal capabilities. However, the technologies are just now becoming operational and evaluations of their overall effectiveness cannot be made without more experience and a directed effort to collect relevant data for evaluation.
8. No single technology has been identified that by its addition would solve the Nation's overall drug interdiction problem. But there are many opportunities for individual technologies to make incremental contributions to specific Federal interdiction efforts. Realizing these opportunities may require development of new technologies or procurement of increased numbers of existing technologies. However, most technological improvements, by themselves, may have only a temporary benefit because, based on the record, the drug traffickers will take rapid and usually successful actions to neutralize the effectiveness of new interdiction techniques.

9. There is a serious lack of support for research, development, test, and evaluation of new or transferred technologies within all of the drug interdiction agencies. Opportunities exist within other Federal agencies (especially the national laboratories and Department of Defense (DOD) laboratories) to provide some of the needed capabilities.

### *Goals and Options*

Even though goals for the national drug interdiction program are seldom stated explicitly, it appears that three major objectives make up the implicit working goals of all of the agencies involved. These are:

1. to constantly harass and deter smuggling attempts by significant modes and at key locations and to work toward disrupting the trafficking networks, seizing as many drugs as possible, and making arrests of the drug traffickers;
2. to force the most vulnerable drug trafficking organizations out of business; and
3. to demonstrate a national resolve to curtail the  
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While these goals do not lead to specific measures of effectiveness, it may be useful to consider how well the technologies, agencies, and programs are directed toward them.

Operationally, the above goals have been used by each interdiction agency to develop strategies that are reasonably consistent with each other. OTA's investigation has concluded that at least three elements are vital to such strategies:

1. to apply constant pressure on drug traffickers operating wherever intelligence or experience indicates that significant activity takes place;
2. to constantly monitor trafficking patterns and smuggling attempts to direct interdiction pressure; and
3. to conduct limited duration special operations that cause exceptional problems, costs, or risks for the traffickers.

OTA has found that the front-line interdiction agencies, in general, use these strategies implicitly, if not explicitly, in their day-to-day operations. And, these strategies can fulfill the national goals. For example, constant pressure fulfills the general harassment goal; constant monitoring can direct that pressure to maximize seizures and arrests; special operations can force out the vulnerable organizations and also produce quick successes that contribute to demonstrating national resolve.

Congress passed the Anti-Drug Abuse Act of 1986 (Public Law 99-570) in October 1986. Several provisions of the act are directed at enhancing Federal interdiction efforts conducted by the Drug Enforcement Administration (DEA), the Coast Guard, and the Customs Service as well as those supported by DOD and other agencies. The interdiction agencies, therefore, can benefit from a unique opportunity to allocate new resources and redirect existing ones to meet the objectives of the bill. Other provisions provide the opportunity to reallocate agency responsibilities and provide direction. For example, the Coast Guard may assume a greater role in the air interdiction mission. The National Drug Enforcement Policy Board is charged with making decisions about such changes in the missions.

This OTA assessment of interdiction technologies suggests a range of options that could be employed by the Federal agencies in an effort to improve the effectiveness of future operations, increase success within their operational strategies, and make more efficient use of resources. These options are listed below:

- The principal interdiction agencies, under the direction of the National Drug Enforcement Policy Board, the National Narcotics Border Interdiction System, or another central authority, could prepare a coordinated long-range plan for deployment of interdiction resources and technologies to apply pressure on major smuggling modes at ports of entry and air, marine, and land borders. This would entail matching resources to the present threat and developing a system to assure that consistent monitoring of trafficking is fed into the planning process. The plan could include networks for intelligence and surveillance data as well as designated commands for specific arenas. OTA has noted throughout its report deficiencies in information and command networks and has stressed centralized planning.
- Establish a system and standards common to all agencies which would be used to evaluate deterrent capabilities and the effectiveness of technologies and techniques used for interdiction. The system would need to include specified data to be collected, standards for measuring detection and apprehension rates, consistent costing methods, and procedures for using the most appropriate data to evaluate systems or operations.
- For the port of entry interdiction problem, the Customs Service or another agency could establish a substantial R&D program to develop more effective detection technologies. OTA has found that there is some promise of technological advancement in this area but R&D efforts are too small to conduct needed work. Existing National laboratories could provide the technical base for a major R&D effort. OTA has made suggestions for specific program elements in later sections of this report.

- For illegal border entry interdiction (air, marine, and land), a cooperative agency group could design a border surveillance-detection network for smuggler traffic. OTA has found that sufficient technologies (mostly military)

are available to address this problem, but that a design for deployment is lacking. An OTA suggested approach is contained in other sections of this report.