

This chapter offers a wide-ranging set of possible changes in the defense budget. It would not, however, necessarily be desirable to pursue all the changes simultaneously. For example, some proponents of slowing the pace of the strategic force buildup would at the same time wish to devote more resources to strengthening conventional forces.

Moreover, even implementing all the proposed cuts would not result in large reductions in outlays during the next few years. Indeed, if all of the budget-reducing items in this chapter were pursued simultaneously, actual outlays would be reduced by only about \$1 billion in 1983 despite reductions of about \$14 billion in budget authority (see Table III-3). This happens because most of the cuts are in investment accounts where outlays often occur several years after budget authority is created. Substantially larger reductions in defense outlays in the next few years would require cuts in operating accounts. Yet, increased spending in operating accounts is generally felt to be essential for maintaining military readiness, and cuts in these accounts might therefore be less acceptable.



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## CHAPTER IV. INTERNATIONAL AFFAIRS

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The international affairs budget function (150) includes foreign economic and financial assistance, military assistance, the diplomatic and consular services, foreign information and exchange activities, and international financial programs.

Foreign economic assistance programs include Public Law 480 food aid, which provides both agricultural commodities for distribution abroad (Title II) and financing for sales of U.S. agricultural exports (Titles I and III); the Economic Support Fund (ESF), which provides economic assistance to promote political and economic stability; and contributions to the multilateral development banks--the World Bank, the Inter-American and Asian Development Banks, and the African Development Fund. International financial programs include the Export-Import Bank, which provides both direct loans and loan guarantees aimed at promoting U.S. exports of goods and services.

The foregoing programs affect the spending side of the budget; other international programs affect tax receipts. Domestic International Sales Corporations (DISCs), for example, are intended to promote exports by permitting a corporation to defer payment of income tax on profits. Similarly, the Generalized System of Preferences (GSP) permits a large variety of exports from less-developed countries to enter this country duty free.

### BUDGET HISTORY AND PROJECTIONS

Net outlays for the international affairs function rose from \$4.3 billion in 1970 to \$11.1 billion in 1981 (see Table IV-1). In 1982, net outlays are expected to decline slightly to \$11.0 billion. Assuming a continuation of current policies, net outlays are projected to increase from \$11.7 billion in 1983 to \$14.7 billion in 1987.

#### Historical Trends, 1970-1981

While net outlays for international affairs rose by almost \$7 billion between 1970 and 1981, they declined as a proportion of total federal outlays and of gross national product.

Most of the increase in net outlays occurred between 1973 and 1975 and after 1979. The increase from \$4.1 billion in 1973 to

TABLE IV-1. FEDERAL OUTLAYS FOR INTERNATIONAL AFFAIRS  
(In billions of dollars)

Program	Actual		Estimated 1982	Baseline Projection	
	1970	1981		1983	1987
Foreign Economic and Financial Assistance					
P.L. 480	0.9	1.3	1.0	1.0	1.3
Functional development assistance	0.6	1.1	1.1	1.2	1.5
Economic Support Fund	0.5	2.1	2.4	2.5	3.2
Multilateral development banks	0.2	1.0	0.9	1.0	1.6
Miscellaneous	<u>0.6</u>	<u>0.8</u>	<u>1.1</u>	<u>1.0</u>	<u>1.4</u>
Subtotal	<u>2.8</u>	<u>6.3</u>	<u>6.5</u>	<u>6.7</u>	<u>9.0</u>
Military Assistance	0.6	1.0	0.8	0.9	1.1
International Financial Programs					
Export-Import Bank	0.2	2.1	1.9	2.1	1.6
Miscellaneous	<u>0.1</u>	<u>-0.1</u>	<u>-0.3</u>	<u>-0.4</u>	<u>-0.3</u>
Subtotal	<u>0.3</u>	<u>2.0</u>	<u>1.6</u>	<u>1.7</u>	<u>1.3</u>
Pay Raises <u>a/</u>	---	---	---	0.1	0.4
Other	<u>0.6</u>	<u>1.8</u>	<u>2.1</u>	<u>2.3</u>	<u>2.9</u>
Total	4.3	11.1	11.0	11.7	14.7

a. Employee compensation is included in the program totals for 1970, 1981, and 1982. In the CBO baseline, the projected pay raises appear in function 920. In this report, they have been allocated to their respective functions for 1983 and 1987 so that the function totals for all five years are compatible.

\$6.9 billion in 1975 occurred largely because of rising outlays on military assistance and on the Export-Import Bank. Between 1979 and 1981, net outlays increased from \$6.1 billion to \$11.1 billion, the bulk of the increase going to the Eximbank and other international financial programs, including the Foreign Military Sales Trust Fund. Higher outlays in the foreign economic and financial assistance subfunction also contributed to the increase.

As a consequence of these differing growth rates, the relative importance of international affairs programs has changed since 1970. Outlays for the Export-Import Bank have risen from approximately 5 percent of the total net outlays for the function in 1970 to over 18 percent in 1981, raising the relative contribution of international financial programs from 7 percent in 1970 to 18 percent in 1981. The share of total net outlays devoted to food aid has declined from over 20 percent to about 12 percent. Multilateral development assistance has maintained approximately the same share of total net outlays. The Economic Support Fund has increased in importance from 11 percent of net outlays in 1970 to almost 19 percent in 1981, while the share of military assistance has declined slightly from about 13 percent to 9 percent.

These changes reflect shifts in the regional focus of aid flows as well as changes in aid policy. Currently, Israel and Egypt have replaced Southeast Asia as the major recipients of U.S. bilateral aid. Reflecting the needs of these countries, an increased proportion of aid resources has been devoted to supporting the balance of payments through the Economic Support Fund, and to financing the purchase of military equipment, while the share of resources devoted to food and infrastructural projects aid has decreased. Policy objectives have also changed. With the adoption of the New Directions legislation in the early 1970s, the emphasis of aid flows shifted from financing basic infrastructure to helping the poorest people within the developing countries through such programs as financing the adoption of appropriate technologies. The increased importance of the Export-Import Bank reflects a heightened interest in export promotion--in support of U.S. domestic and foreign policy objectives.

#### The 1982 Budget Decisions

In 1982, net outlays for the international affairs function are expected to decline slightly from the 1981 level of \$11.1

billion to \$11.0 billion. This is more than accounted for by a decrease in the international financial programs subfunction, where outlays are expected to fall from \$2.0 billion to \$1.6 billion. About half of that decrease will be in net outlays for the Eximbank. The 1981 reconciliation act did not materially affect the 1982 budget decisions except for authorizing the sixth replenishment of the International Development Association and the general capital increase of the World Bank.

#### Baseline Projections, 1983-1987

Between 1983 and 1987, net outlays for the international affairs function are projected to increase from \$11.7 billion to \$14.7 billion. Much of this is accounted for by increases in net outlays for the foreign economic and financial assistance subfunction, which are projected to increase from \$6.7 billion in 1983 to \$9.0 billion in 1987, increasing this subfunction's share of total international affairs outlays from 57 percent to 61 percent. Most of this increase is attributable to increased outlays for the Economic Support Fund and the multilateral development banks. Over this period, net outlays for international financial programs are projected to decline from \$1.7 billion in 1983 to \$1.3 billion in 1987. Decreased outlays for Eximbank account for all of this decline.

#### BUDGET STRATEGIES

The Congress could reduce international affairs outlays in at least two ways. It could reduce federal export promotion activities. It could also reassess foreign aid programs in the light of changed economic conditions within the United States and among recipient countries.

#### Reducing U.S. Export Promotion Efforts

Federal export promotion efforts have been justified primarily on the grounds that they reduce trade balance deficits and increase employment within the United States. In 1981, such programs accounted for about one-fifth of the net outlays for the international affairs function. Other export promotion programs affect the budget primarily by reducing tax receipts, as, for example,

Domestic International Sales Corporations. The Treasury estimates that this program alone decreased tax receipts in 1980 by \$1.3 billion.

If these programs increased exports by removing market inefficiencies, promoting productivity, or producing wage and price performance superior to that of other countries, they would result in gains for all U.S. citizens. But programs that promote exports by subsidizing exporters do not produce gains for all citizens. At best, such programs produce gains for exporters at the expense of other U.S. citizens; at worst, they produce losses for all U.S. citizens and benefits only for foreigners.

An export subsidy can produce a net gain for the United States if it employs resources that otherwise would have been idle; but there is no reason to believe that export subsidies employ otherwise-idle resources in any systematic way. Export subsidies increase the sales of some products relative to those of other exported and nonexported products; but other macroeconomic policies could be designed to produce more general economic expansion. When the economy is operating near full capacity, the increase in employment in export industries will come at the expense of employment in nonsubsidized industries. Therefore, if export promotion activities continue at all levels of aggregate economic activity, they may expand employment in slack years, but aggravate inflation in other years of high economic activity.

The two major export promotion activities discussed here are the Export-Import Bank and Domestic International Sales Corporations. Since these export promotion activities produce few measurable national economic benefits, the case for national export promotion through subsidization is commensurately weakened. Export promotion can produce local benefits, however, where otherwise unemployed resources are used or when one state or region gains at the expense of another in employment volume or in jobs paying higher wages or requiring more skill. State and local governments might then promote such activities, just as some now offer special loans and tax incentives to desirable firms that locate in their areas.

Export-Import Bank. The Export-Import Bank provides direct loans and loan guarantees to promote the export of U.S. goods and services. In 1981, net outlays of the Eximbank amounted to \$2.1 billion, calculated as the difference between Eximbank's cash

receipts and expenditures. Cash receipts include net interest earnings, repayments of principal on old loans, and insurance premiums and guarantee fees. Expenditures include funds disbursed on loans during the year, administrative expenses, and claims that result from the insurance and guarantee programs.

The direct loan program of the Export-Import Bank aims at increasing exports by providing loans at below-market interest rates to finance foreign purchases of U.S. products. Currently, Eximbank charges 10.75 percent on non-aircraft loans; in comparison, the private sector charges rates of 13.6 percent to 14.2 percent on comparable loans. 1/ The Eximbank subsidy equals the difference between the Eximbank interest rate and the market interest rate that exporters would otherwise pay. CBO estimates that the direct loan program involves an annual subsidy of between \$200 million and \$1 billion. 2/ U.S. exporters and foreign importers divide this subsidy. If exporters leave prices unchanged, foreigners obtain the entire benefit from the U.S. loan subsidy; if exporters raise their prices, they may recapture the gain received by the foreigner from the lower interest rate. 3/

The subsidy could be eliminated by increasing the interest rate charged on Eximbank loans to the market rate. Raising the interest rates on these loans to market rates would reduce the Export-Import Bank's budget impact while raising economic efficiency. For example, increasing interest rates on new direct loans

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1. Eurodollar loan and U.S. AAA corporate bond rates, December 1981.
  2. Congressional Budget Office, "The Benefits and Costs of the Export-Import Bank Loan Subsidy Program" (June 1981).
  3. At high employment there will be no net economic gain for the United States since some other U.S. economic activity must be curtailed to free resources for exports. Suppose a U.S. investment project must be given up. That forgone investment project would have earned at least the market rate of interest. In place of that investment project, however, the United States gains only the loan to finance the exports--bearing the below-market subsidized rate of interest.

to market interest rates would produce immediate savings of \$2 million in 1983 and \$342 million over the next five years (see Appendix A-150-c). (Savings accrue only on new loans since Eximbank cannot increase interest rates on previously committed loans.) The volume of direct loans would also decline, further contributing to a decrease in net outlays.

Eximbank also gives subsidies through loan guarantee programs, when guarantees are sold to U.S. banks at prices below their true market value. When Eximbank guarantees a loan made to finance an export, it creates a financial instrument that can serve as collateral for loans from other banks or from the Federal Reserve System. Interest rates for loans secured by such federally guaranteed collateral are among the lowest charged in the market. The potential profit to the underwriting bank and the exporter equals the difference between the market rate for commercial loans by importers and the rate at which the bank can borrow against the guaranteed loan. As mentioned above, commercial market rates in December 1981 varied between 13.6 percent and 14.2 percent, while comparable government borrowing rates were approximately 10.9 percent for 90-Day Treasury bills and 13.6 percent for five-year U.S. Treasury bonds.

The loan guarantee program aims at encouraging commercial banks to extend export credit loans by reducing the risk and uncertainty inherent in export credits. Proponents of federal loan guarantees point out that, if private commercial banks overestimate the risk of financing foreign transactions, they will supply too few such guarantees at a price that reflects their social value. When the government fills this gap by lending at market rates, it provides a volume of guarantees commensurate with their social value and raises economic efficiency. Charging such higher prices for the guarantee programs would reduce Eximbank's net outlays, the difference between Eximbank's expenditures and cash receipts, which include guarantee fees. Charging higher prices would still promote commercial bank credits that otherwise would have been unavailable because of market imperfections, thereby contributing to increased economic efficiency.

The Export-Import Bank is sometimes said to provide a conduit for foreign aid. The distribution of its loans among countries does not correspond, however, to the patterns of all other development assistance. In 1979, for instance, 75 percent of Eximbank loans went to Europe, East Asia, and Africa, representing 19

percent, 40 percent, and 16 percent of total lending, respectively. But when the Congress votes aid directly, the regional composition differs: the countries receiving 75 percent of Eximbank aid got only 25 percent of 1979 direct aid, while 75 percent of that year's direct aid consisted of economic assistance to Northeast Asia, South Asia, and Latin America. The Congress may intend these differences in aid distributions but, given oversight patterns, it seems more likely that the disparities reflect the secondary importance of the foreign aid function in Eximbank loans. If the goal is to transfer benefits to low-income countries, the Eximbank program is not an efficient mechanism for doing so.

The government could use Eximbank loans as a negotiating tool in its current international discussions aimed at further limiting export credit subsidization. If negotiations were successful, the subsidies involved in Eximbank lending would decrease over time. Such an outcome would presuppose close coordination between Eximbank lending and U.S. Treasury negotiations, as well as between Eximbank lending policies and other trade regulations, such as in anti-dumping legislation.

Domestic International Sales Corporations. Domestic International Sales Corporations promote exports by permitting a corporation to defer--in effect, indefinitely--payment of corporate income tax on part of its profit. As with other export subsidies, nonsubsidized U.S. citizens incur costs--through lost tax revenues--while U.S. exporters and foreign importers gain. When the gains accrue only to foreign importers, U.S. citizens as a group lose.

Eliminating the DISC program would bring significant increases in revenues. The Treasury estimates that as much as \$1.3 billion in tax revenues were lost in 1980 from the DISC exemptions; CBO estimates that phasing out the DISC program would raise revenues by \$0.9 billion in 1987 (see Appendix B-150-a).

Reassessing Individual Foreign Aid Programs in Terms of Current Policy Objectives and Economic Conditions

Total net outlays for foreign aid, including bilateral functional assistance, food aid, multilateral development banks, and the Economic Support Fund, amounted to \$6.3 billion in 1981.

Measuring the benefits of foreign aid programs--which serve political and humanitarian ends--is more problematic than assessing export promotion programs, whose ends are measurable economic benefits. As a result, discussing how changes in foreign aid programs alter net economic benefits to the United States is more difficult. It is possible, however, to discuss the individual programs of the foreign aid function in terms of their consistency with current foreign policy objectives and current economic conditions. In particular, when circumstances have changed substantially since individual programs were initiated, the terms of these programs should be reassessed. Savings could be obtained by reducing programs that no longer achieve current policy objectives, either because economic conditions have changed or because policy objectives have changed. For programs that fit current policy objectives, savings might still be achieved by examining the degree of interest subsidy in the programs. For example, several foreign aid programs involve loans at fixed, below-market interest rates. The size of the interest subsidies has increased as market interest rates have increased, and the Congress could decide to change them. Moreover, it could restructure the subsidies to correspond to the different income levels of the recipient countries if this was considered consistent with foreign policy objectives. The amount of savings would depend on the extent to which the average interest rate on the loans was increased.

Public Law 480 Agricultural Commodity Sales. The Public Law 480 program was established in the 1950s to promote U.S. agricultural exports. Commodities are bought by the Commodity Credit Corporation, typically on the open market, and then provided to the recipient nation. Under Title I of the program, sales are financed through concessional loans; under Title II, grants are provided for humanitarian purposes; under Title III, Title I loans can be converted into grants. In 1981, net outlays for all three titles amounted to \$1.3 billion, of which about 11 percent was provided as loans.

Much of the original justification for the Public Law 480 program has disappeared. The United States no longer has persistent large agricultural surpluses, and currency inconvertibility is less of a problem than in the 1950s. Because of these changed circumstances, some observers have called for ending the program. Opponents of the program also argue that in some countries Public Law 480 aid may have had a negative effect on agricultural development, thereby running counter to the objectives of the foreign aid program.

Advocates point out that the program has evolved into a flexible policy instrument that allows the Administration to shift aid quickly to different recipients as needs and policy objectives change. Commodities delivered under this program are commonly sold in urban markets in the recipient countries; recipient governments, therefore, treat the proceeds as general revenues.

A decision to reduce the size of Title I of the Public Law 480 program would depend on some determination of the extent to which the program contributes to current policy objectives, given that the original justifications for the program have disappeared (see Appendix A-150-b).

Alternatively, savings could be achieved by decreasing the overall level of loan subsidies under Title I, or by adjusting their level to the income levels of the recipient countries. Interest rates on these loans vary but they currently require a minimum 2 percent interest rate during a ten-year grace period, and 3 percent during a repayment period of up to 30 years. <sup>4/</sup> The subsidy element has increased over time as market interest rates have increased. Increasing interest rates on Title I loans to 8 percent would produce savings of \$330 million over the next five years. This might, however, accelerate a trend in recent years to convert Public Law 480 loans into grants. For example, in 1981 approximately \$0.1 billion of Title I loans were transformed into grants under Title III. Such shifts would decrease the savings from this change.

Economic Support Fund Loans. Unlike functional assistance, which is earmarked to finance specific projects, Economic Support Fund monies are not tied to particular programs. Loans accounted for about 12.5 percent of ESF's \$2.2 billion obligations in 1981; grants constituted the rest. Some \$950 million in new loans was disbursed, producing a cumulative balance of direct loans outstanding of \$4.9 billion. Savings could be achieved by increasing the interest rate on all loans, or alternatively by raising the rate for higher-income recipients. Currently, the

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4. These minimum levels are set by Title 22, Section 2151t, of the U.S. Code Annotated.

interest rate charged is less than 3 percent. Most of these loans are provided to higher-income recipients.

As with the Public Law 480 program, the degree of subsidization has grown over time because market interest rates have increased while the rates charged on these loans have remained constant. At present, ESF loans bear a minimum 2 percent interest rate over a ten-year grace period, followed by 3 percent over a 30-year repayment period. The interest rate on federal long-term bonds at the program's inception was only 6.1 percent, compared with about 14 percent in January 1982. An increase in the interest rates charged would produce a savings in the form of increased interest receipts (see Appendix A-150-a). Increasing the interest rate on ESF loans to 8 percent would produce savings of \$5 million in 1983 and \$139 million over the next five years. Over time, the subsidy involved in these loans could be held constant by tying the rates charged to the market rate.

Multilateral Development Banks. In 1981, U.S. outlays for its membership in multilateral development banks--the World Bank, the Inter-American Development Bank, the Asian Development Bank, and the African Development Fund--totalled \$1.0 billion. Just as the United States might adjust interest rates on bilateral loans according to the recipients' income levels, it might encourage the multilateral development banks to do likewise. Increased interest receipts, for a given distribution of loans, would decrease these banks' requirements for resources and, consequently, U.S. contributions.

The Generalized System of Preferences. As part of its foreign aid effort, the United States permits a large variety of exports by less-developed countries (LDCs) to enter the United States duty free. Revenue losses from this program might be reduced by ending the eligibility of relatively high-income LDCs for these concessions. Since the objective is to promote LDCs' export competitiveness, the preferences could be phased out as a country becomes more competitive.

Eliminating the eligibility of products from certain highly competitive LDCs, such as Taiwan, South Korea, Hong Kong, Brazil, and Mexico, would significantly reduce U.S. revenue losses. In 1980, these five countries accounted for \$4.4 billion of U.S.

imports under a total GSP program of \$7.3 billion. Subjecting these imports to applicable duties would have provided \$244 million in additional revenues. <sup>5/</sup> Removing these countries' GSP eligibility would reduce the budget deficit by increasing revenues, although leaving expenditure levels unaffected. Such a policy change would, however, involve a cost to consumers in the form of higher prices.

#### CONCLUDING COMMENTS

Two strategies have been proposed through which the Congress could reduce outlays on international affairs. The first would narrow the scope of federal export promotion activities through the Export-Import Bank and Domestic International Sales Corporations. This would not only reduce budget outlays and tax expenditures, but would eliminate federal subsidies that produce few measurable economic benefits.

The second strategy would reassess existing foreign aid programs. Unlike export promotion programs, whose ends are measurable economic benefits, foreign aid programs aim at securing foreign policy objectives. Measuring success, therefore, in terms of net economic benefits is more problematic. It is possible, however, to discuss individual foreign aid programs in terms of current policy objectives and current economic conditions. In particular, where circumstances have changed substantially since individual programs were initiated, it may be time to reappraise their costs and benefits. In some cases, savings might be realized by modifying the programs to make their terms more consistent with current circumstances.

The first budget reduction strategy, reducing export promotion subsidies, promises the larger budget savings. In 1981, such programs accounted for almost 20 percent of the \$11.1 billion total net outlays for the international affairs function. This does not include the tax expenditures involved in export promotion programs such as DISC. The second budget reduction strategy, decreasing the interest subsidies on foreign aid loans, would

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5. This estimate assumes an average tariff of 5.6 percent ad valorem, which is the average for U.S. manufactured imports when all the Tokyo Round reductions are taken into account.

produce savings, but if such subsidies were considered part of the desired total foreign aid supplied by the United States, decreased interest subsidies might be offset by increases in other foreign aid programs, cancelling any budget savings from the policy change.



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## CHAPTER V. NATURAL RESOURCES, ENERGY, AND SCIENCE

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The federal budget functions for natural resources, energy, and science cover a wide variety of programs. The natural resources and environment function (300) contains two main categories of subfunctions: pollution control and abatement and development and protection of the nation's natural resources. The first category consists largely of the Environmental Protection Agency's (EPA) regulatory and enforcement activities and programs providing grants to states and localities for the construction of wastewater treatment facilities and regulation of pollution. Development of natural resources includes the Army Corps of Engineers construction programs for waterways and harbors, Department of Agriculture (USDA) land conservation and forestry programs, and Department of the Interior (DOI) national parks and programs for wilderness areas and federal rangeland management. The Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) budget is also in this function.

The energy function (270) contains most of the Department of Energy's (DOE) programs, with the notable exception of its defense-related activities, such as the manufacture of nuclear weapons. Among the major programs included in the energy function are DOE energy research and development programs (R&D), regulation, the direct production of electrical power, and the Strategic Petroleum Reserve. The Department of the Interior and EPA also have small energy programs.

The general science and space function (250) includes most of the budgets for the National Aeronautics and Space Administration (NASA) and the National Science Foundation (NSF). DOE's general science programs are also in this function.

### BUDGET HISTORY AND PROJECTIONS

Over the past decade, net federal outlays in the natural resources, science, and energy areas grew slightly more rapidly than the gross national product (GNP), rising from 0.8 percent (\$8.6 billion) of GNP in 1970 to 1.0 percent (\$30.3 billion) in 1981. But increasing concern with the size of federal expenditures has reversed this trend. CBO estimates that outlays for

these functions will be \$25.9 billion in 1982 and fall to \$25.3 billion in 1983 if current policies continue. For the 1983-1987 period, total outlays are projected to be \$131.9 billion.

### Historical Trends, 1970-1981

The overall increase in expenditures since 1970 has been distributed unevenly among the three functions. Natural resources increased most, rising from \$3.1 billion in net outlays in 1970 to \$13.6 billion in 1981. Energy was second, increasing from \$1.0 billion in 1970 to \$10.3 billion in 1981. General science and space lagged, rising less than 50 percent during the decade, from \$4.5 billion in 1970 to \$6.4 billion in 1981. In 1970, the space and science budget received more than half of the money devoted to these areas, while energy and natural resources received 12 and 36 percent, respectively. By 1981, the space and science budget received only one-fifth of the total while energy and natural resources functions increased their shares to roughly 34 and 45 percent, respectively, demonstrating the shift in the relative importance of these functions over the decade.

The net outlays shown in Table V-1 document these shifts. The gross outlays were much higher, but were offset by government receipts from activities such as sales of irrigation water and electrical power. In 1981, offsetting receipts in the energy and natural resources functions totaled \$2.6 billion.

Three principal factors caused the budgetary growth in these functions since 1970: increased environmental concerns, the energy crisis, and inflation. Passage of amendments to the Clean Water and Clean Air Acts in the early 1970s symbolized the shift in environmental considerations from the periphery to the center of public policy. Independently, the world price of oil began its dramatic rise and the Congress adopted measures to reduce U.S. vulnerability to oil disruptions. While each of these events affected public policy differently, they all resulted in more expenditures. But these new interests did not displace old ones; established programs also continued and grew more expensive as inflation and other pressures increased their costs.

Natural Resources. Several program areas contributed to the \$10.5 billion growth in net outlays that occurred between 1970 and 1981 in the natural resources function (see Table V-1). In the pollution abatement subfunction, the largest single area of growth was the EPA wastewater treatment construction grants program,

TABLE V-1. FEDERAL OUTLAYS FOR NATURAL RESOURCES, ENERGY, AND SCIENCE (In billions of dollars)

Major Programs	Actual		Estimated 1982	Baseline Projection	
	1970	1981		1983	1987
<b>Natural Resources</b>					
Water resources	1.6	4.3	4.2	4.2	5.2
Conservation and land management	0.9	3.4	3.2	3.4	3.8
Recreational resources	0.4	1.6	1.5	1.4	1.4
Pollution control and abatement	0.4	5.2	5.3	5.0	4.3
Other natural resources	0.4	1.5	1.5	1.6	1.8
Pay raises <u>a/</u>	---	---	0.2	0.6	2.2
Deductions for offsetting receipts	-0.6	-2.5	-3.2	-3.5	-5.2
Net Subtotal, Natural Resources	3.1	13.6	12.8	12.6	13.6
<b>Energy</b>					
Energy supply	0.9	5.4	4.4	3.5	4.5
Energy conservation	0.0	0.7	0.7	0.5	0.5
Emergency preparedness <u>b/</u>	0.0	3.3	0.2	0.4	0.2
Energy information, policy, and regulation	0.1	1.0	1.0	1.0	1.1
Pay raises <u>a/</u>	---	---	0.1	0.2	0.4
Deductions for offsetting receipts	0.0	-0.1	-0.1	-0.1	-0.1
Net Subtotal, Energy	1.0	10.3	6.2	5.5	6.6
<b>General Science and Space</b>					
General science	0.9	1.5	1.6	1.6	2.0
Space flight	2.3	3.1	3.4	3.4	3.4
Space science	0.9	1.4	1.4	1.5	1.5
Pay raises <u>a/</u>	---	---	0.0	0.1	0.3
Other	0.4	0.4	0.5	0.6	1.2
Net Subtotal, General Science and Space	4.5	6.4	6.9	7.2	8.4
Net Total	8.6	30.3	25.9	25.3	28.6

NOTE: Details may not add to totals because of rounding.

- a. See Table IV-1, footnote a, for distribution of pay raises. In this table, however, pay raises for 1982 are listed as a separate category.
- b. Oil acquisition costs for the Strategic Petroleum Reserve are off-budget beginning in 1982, and therefore are not included in this table after 1981.

which had less than \$200 million in outlays in 1970 but totaled \$3.9 billion in 1981. In addition, other abatement, control, and compliance expenditures rose from about \$200 million in 1970 to \$1.3 billion in 1981. Expenditures by the Army Corps of Engineers for the development of water resources had the greatest outlay growth in the other natural resources subfunctions, rising from \$1.2 billion in 1970 to \$3.2 billion in 1981. Land management and conservation programs increased from \$900 million in 1970 to more than \$3.4 billion in 1981. DOI recreational programs, such as those of the National Park Service, also experienced large outlay growth, rising from \$370 million in 1970 to about \$1.6 billion in 1981.

Energy. In the energy function, several different programs produced most of the \$9.3 billion growth in net outlays between 1970 and 1981. The category of energy expenditures experiencing the largest increase was research, development, and demonstration, which grew by \$3.5 billion over the decade to reach approximately \$4.0 billion in 1981. Power marketing outlays by the Tennessee Valley Authority and similar agencies also increased substantially during this period, rising from \$350 million to over \$1.8 billion in 1981. The Strategic Petroleum Reserve did not exist in 1970, yet in 1981 DOE spent approximately \$3.3 billion to purchase and store oil. During this period, the costs of energy regulation and information also rose to nearly \$970 million in 1981, up substantially from 1970 when such expenditures were only about \$100 million.

Science. The general science and space function experienced growth of about \$2.0 billion in outlays in the last decade. The largest single increase was in the space flight program--mainly because of the Space Shuttle--which increased by \$800 million to \$3.1 billion in 1981. The next largest increase occurred in the budget for the National Science Foundation, whose outlays doubled over the decade, reaching nearly \$1.0 billion in 1981.

### The 1982 Budget Decisions

Natural Resources. The Congress has cut funds for a number of natural resources and environmental programs. No funds for EPA construction grants have yet been appropriated for 1982, but the authorized ceiling has been reduced from \$5.0 billion to \$2.4 billion. Even if the entire \$2.4 billion is appropriated, the 1982 funding level will be substantially less than appropriations in previous years, which were in the \$3 to \$4 billion range in