Minerals in the World Economy

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In 1973, the world's mineral industry again registered gains in almost all measurable aspects of its activities despite the slump in the waning months of the year occasioned by the early stages of the developing, nearly worldwide energy crisis. Following years of relative complacency regarding mineral raw material supplies, the Governments of many nations decisively were made aware of the critical nature of their dependence upon other countries for the mineral energy materials that provide the basis for their industrial economic viability. Their awareness was occasioned by the sharply rising oil prices and/or the embargo of crude oil and products from the oil producing areas of North Africa and the Arabian Peninsula. Despite the severity of the problems that surfaced with the Yom Kippur War, the world's continually expanding population continued to pursue the goal of a higher standard of living. This goal led to higher levels of industrial activity, and hence to increased production, trade, and consumption of mineral commodities for the world as a whole, despite declines in some nations.

The United Nations index of overall world industrial production for 1973 was 9.6% higher than that for 1972, reflecting both increases in output and inflationary price rises. The following tabulation compares on a percentage change basis, the differences in indexes for various sectors of the mineral industry between 1971 and 1972 and between 1972 and 1973 with the changes in the index for overall industrial production:

Industry sector	Percentage change in United Nations world industrial production indexes	
	1971 to 1972	1972 to 1973
Extractive industries:		
Metals	+0.7	+5.3
Coal	−1.9	+2.0
Crude petroleum and natural gas	+6.7	+6.3
Total extractive	+4.7	+5.7
Processing industries:		
Base metals	+7.8	+10.3
Nonmetallic mineral products	+6.6	+8.5
Chemicals, petroleum, coal products	+9.2	+11.6
Overall industrial production	+7.2	+9.6

The figures for 1971 to 1972 in the foregoing tabulation differ from those published in the previous edition of this chapter as a result of improvements in the data base following publication of the previous edition. It is perhaps most significant to note that with the exception of the crude petroleum and natural gas sector of the extractive industries, all sectors listed registered a greater gain between 1972 and 1973 than between 1971 and 1972, this despite the energy problems of 1973. It is also noteworthy that within the processing industries, the base metals sector and the chemicals, petroleum, and coal products sector both registered greater percentage increases than did overall industrial production. In contrast, each of

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the listed extractive industry sectors failed to show increases that were as substantial as that registered for overall industrial production.

Available partial and preliminary data on world trade in mineral commodities in 1973—data on the trade of developed market economy nations only—suggest that the total value of world mineral trade in 1973 was of the order of $147,000 million, up by almost 44% from the $102,331 million world total recorded for 1972. A part of the increase was the result of virtual worldwide inflation and devaluation of the U.S. dollar relative to some foreign currencies, but substantial gains in the quantity of materials moved also played a significant role. In the case of crude oil, the most significant single commodity traded (on both the tonnage and value basis), figures available to the Bureau of Mines indicate that 1973 exports totaled about 11,571 million barrels, an increase of 11.2% over the 1972 level. Exports of petroleum refinery products increased by 5.8% between 1972 and 1973, totaling 3,313 million barrels in the latter year.

From the viewpoint of consumption of mineral materials, 1973 saw increases in use of all major metals and fuels relative to 1972 levels, but the rate of increase varied from commodity to commodity compared with the growth rate registered between 1971 and 1972. Considering energy materials first, preliminary data suggests that despite the energy crisis, worldwide energy consumption increased by more than 5.7% in 1973, reaching a level of more than 7,835 million metric tons of standard coal equivalent, compared with the recorded 1972 level of 7,410 million metric tons. This increase was substantially higher than the 4.6% growth recorded between 1971 and 1972. In the case of the iron and steel industry, world total consumption of both iron ore and scrap reached new record highs, increasing by 7.7% and 6.8%, respectively, to levels of 680 million tons and 296 million tons, respectively, in 1973. Among the major nonferrous metals, aluminum registered a more modest growth rate between 1972 and 1973 than between 1971 and 1972, but copper, lead, zinc, and tin all recorded higher rates of increase between 1972 and 1973 than in the preceding period.

Reviewing mineral commodity prices, the most newsworthy event of 1973 undoubtedly was the sharp rise in most crude oil prices. In mid-October, the nations of Organization of Petroleum Exporting Countries (OPEC) indicated that crude oil prices would no longer be subject to negotiation and within a short timespan, prices were increased by about 70%. Refinery product prices likewise advanced by substantial amounts by yearend in most countries that were dependent to any extent upon OPEC oil. Among the nonferrous metals, only aluminum registered price declines in 1973 in major market economy nations, while copper, lead, tin, and zinc recorded notable increases.

Examining the influence of international confrontations on the mineral industry, nothing approached the economic impact of oil supply reductions and oil price rises that occurred following the flareup of fighting between Israel and its neighbors during the fall. This military action also adversely affected mineral production within the area as reservists left their jobs to fight and as some processing facilities (chiefly oil refineries) were damaged. However, these results, as well as an increase in regional liquid fuel consumption resulting from military activities, were almost inconsequential from the overall international viewpoint.

Similarly, in Southeast Asia, with the continued reduction in U.S. direct participation in the Vietnam war, requirements for mineral commodity supplies to sustain the war (chiefly fuels and construction materials) again fell off, despite occasional flareups in fighting. The Indochina area's only petroleum refinery, the Phnom Penh facility in the Khmer Republic, badly damaged previously during the war, apparently remained inoperative throughout 1973.

The gradual improvement in relations between the People's Republic of China (PRC) and the major market economy nations of the world was reflected in increased trade in mineral commodities and in mineral industry-related equipment between these areas during 1973.

The general pattern continued of shifting control of mineral industry operations in the developing nations from private corporations owned by foreign interests to public corporations owned wholly or partly by the producing countries. Some of the more noteworthy developments in this regard were in Libya, where the Government

increased its holdings in all oil company operations (except the Esso Standard Libya Inc. liquefaction plant) to the 51% level; in Iraq, where U.S. and Dutch interests in Basrah Petroleum Company, Ltd. were nationalized; and in Peru, where plans for nationalization within the copper industry advanced. It is perhaps significant to note also that despite the change in government in Chile, where the Marxist Allende regime was deposed in September, there were no plans to shift that nation's copper industry back into the direct control of foreign corporations.

PRODUCTION

In 1973, the estimated value of world crude mineral production was $112,400 million. This is 5.7% or $6,100 million above the previous year's total, as indicated in the following tabulation:

Year	Million dollars	
	Value of 53 major crude mineral commodities [1]	Value of all crude mineral commodities [2]
1950	37,224	42,100
1963	67,042	75,800
1968	77,908	88,000
1969	81,504	92,100
1970	86,897	98,200
1971	89,894	101,600
1972	94,089	106,300
1973	99,483	112,400

[1] For details on commodities included, see 1970 edition of this chapter, table 5. Figures for 1950–68 are those reported in Annales des Mines, No. 1, January 1971, p. 14; figures for subsequent years are extrapolated from the United Nations index of world extractive industry output (see table 1 of this chapter).

[2] Data are extrapolated from those in first column to compensate for commodities not included in original source study. For details on the basis of extrapolation, see the 1970 edition of this chapter, under "Value of World Mineral Production."

The 1972–73 growth rate exceeded that registered for 1970–71 and 1971–72 but fell short of the 6.6% increase registered for 1969–70.

The value added by processing of crude mineral commodities in mineral industry plants of various nations was estimated very roughly at about $250,000 million for 1973, a figure that is considered a low estimate because of the lack of complete data for all crude mineral commodities processed.

PRODUCTION INDEX PATTERNS

The United Nations indexes for mineral industry production of the world (excluding centrally planned economy countries of Asia) are given in table 1, together with index figures for major sectors of the industry and selected major geographic areas.

The index for output of the extractive industries and the processing industries again increased in 1973, exceeding the 1972 levels by 5.7% and 11.6%, respectively. The growth rate again exceeded that of the past few years. Production was up for every sector of the industry, but the major portion of the advance was again due to output of the processing industries, particularly chemicals, petroleum, and coal products.

On the basis of industry sectors, the major growth areas were chemicals, petroleum, and coal products, up 11.6%, and base metal processing industries, up 10.3%. Nonmetallic mineral products advanced 8.5%, exceeding the 6.6% growth rate between 1971 and 1972, while metals showed considerable improvement over the previous year with a 5.3% increase in production. In the area of fuel materials, coal extraction advanced 2 index points to 104 (1963=100), considerably below the overall industrial growth rate but reversing the downward trend shown by that sector in 1972. Crude petroleum and natural gas extraction registered a 6.3% increase in 1973, but this was slightly below the growth rate registered between 1971 and 1972.

The overall industrial production in-

dex for 1973 by quarters indicates a moderate increase between the last quarter of 1972 and the first quarter of 1973, a minor increase in the second quarter, with a decline in the third quarter to the first quarter level, and then ending the year up 8 index points. The extractive industries as a whole climbed 8 index points from the last quarter of 1972 to the first quarter of 1973 and remained at that level throughout the year, moving up only 1 index point in the last quarter. The subdivisions metal mining and coal did not vary more than 5 index points between any quarter of 1973, and although crude petroleum and natural gas production also remained fairly stable in 1973, that sector showed a jump of 12 index points between the last quarter of 1972 and the first quarter of 1973. Among the processing industries, base metal processing climbed 10 index points between the last quarter of 1972 and the first quarter of 1973, moved up slightly in the second quarter, declined to the year's low in the third quarter, then closed the year at a new high. The index of nonmetallic mineral products climbed steadily through the first half of 1973, then declined 5 index points before closing up in the final quarter. Chemicals, petroleum, and coal products jumped 13 points between the final quarter of 1972 and the first quarter of 1973 and continued to increase before falling off slightly in the third quarter, ending the year up 8 index points in the final quarter.

The United Nations indexes of world mineral industry production also indicate increased output for nearly all the regions listed except for the European Economic Community (EEC), which showed metal production down 7.2%, and total non-Communist industrialized countries, which had a slight decline in coal production. Production of coal also remained at the 1972 level for the United States, Canada, and the EEC. Also significant was the continuation of 1972 production levels of crude petroleum and natural gas in the non-Communist industrialized countries in 1973, particularly the United States and Canada, while Communist Europe increased production in that sector by 7.1% in 1973. The less industrialized countries increased crude petroleum and natural gas output by 9.7%, with the subdivision Asia up 15.8% over 1972. In the processing industries, the areas having the greatest increases in the base metals sector were the United States and Canada, the EEC, and Australia and New Zealand, up by 12.8%, 9.2%, and 12.4%, respectively, in 1973.

It should be remembered that growth rates alone, as shown in the production indexes, do not give an accurate indication of the contribution to total production by a given area or country. Communist areas in particular have generally shown consistently higher growth rates than non-Communist regions, but such output levels are from a lower base level in terms of quantitative output of most commodities. In other cases, the growth rate may be due mainly to industry expansion that is confined to one or several industries, as in the case of iron ore and bauxite in Australia.

QUANTITATIVE COMMODITY OUTPUT

Total world output of 71 mineral commodities for the years 1971–73 is given in table 2. Regional distribution of output for these same commodities for 1973 is given in table 3. In addition to these two tables, the statistical summary at the end of this chapter includes world output of seleced major commodities by principal producing countries for 1971–73.

Nonfuel Mineral Commodities.—Of the 39 metallic mineral commodities listed in table 2, 30 registered production increases in 1973 compared with 1972 output, and 9 showed declines.

Among the 23 industrial nonmetallic mineral commodities for which output data are given in table 2, 17 registered output increases relative to their 1972 performance, and 6 showed declines.

Tables 31 to 46 in the statistical summary section of this chapter give output levels of selected major nonfuel mineral commodities (metals and nonmetals) by major producers for 1971–73.

Mineral Fuel Commodities.—In 1973, the estimated world production of energy from all mineral fuel commodities reached a level of 8,001 million tons standard coal equivalent (SCE), compared with 7,566 million tons SCE in 1972 and 7,217 million tons SCE in 1971. This is the highest level of energy production yet recorded, with record production levels again being posted for each of the major

commercial energy sources [2] listed in table 2. The percentage distribution of each major energy source (coal, petroleum, and natural gas) along with hydro-geothermal-nuclear power for the period 1971–73 is given in the following tabulation:

Energy source	Share of total energy production (percent)		
	1971 [1]	1972 [1]	1973 [2]
Coal (including lignite)	33.0	32.1	30.9
Petroleum	43.6	44.1	45.4
Natural gas	21.1	21.4	21.3
Hydro, geothermal, nuclear electricity	2.3	2.4	2.4
Total	100.0	100.0	100.0

[1] Based on data in United Nations, World Energy Supplies 1969–72. Statistical Papers, Series J, No. 17, New York, 1974, p. 2.

[2] Estimate, based on extrapolation of United Nations data for 1972 using world production data for listed commodities reported and published by the U.S. Bureau of Mines.

Petroleum continued to increase its proportion of total energy production, rising to 45.4% in 1973, and thus remains the primary source of energy. Despite an increase in natural gas production, the proportion of total energy supplied by that mineral fuel declined from 21.4% in 1972 to 21.3% in 1973. The percentage of the total supplied by coal also declined again, falling to 30.9% as petroleum usage increased. Output data by major producing countries for coal, natural gas, and crude petroleum for the 3-year period 1971–73 is given in tables 47, 48, and 49.

TRADE

GENERAL TRENDS

Although complete data on the aggregate value of world mineral trade in 1973 is not yet available, it undoubtedly exceeded by a substantial amount that registered for 1972. Returns for only the developed market economy countries show a 44% increase relative to their 1972 level. In 1972, the latest year for which complete, reasonable reliable data is available, the estimated value of all mineral commodities traded was $102,331 million, an increase of 13.7% over 1971. This is the highest level of mineral commodity trade value yet recorded and represents a $12,294 million increase over the previous year's high. However, despite the increase in value, major mineral commodities' share of all commodities traded accounted for only 24.8% of the total, compared with 25.9% in 1971. This is the lowest percentage of the total since 1967, when this series was first begun. The estimated value of world trade for the period 1968–72 is shown in the following tabulation:

Year	Estimated value of all mineral commodities traded [1] (million dollars)	Increase relative to previous year (percent)	Mineral commodities' share of all traded (percent)
1968	63,361	11.7	26.6
1969	71,202	12.4	26.2
1970	83,865	17.8	26.5
1971	90,037	7.4	25.9
1972	102,331	13.7	24.8

[1] Value estimated from data on mineral commodities appearing in table 4 to which have been added a factor for all mineral commodities not included in that table. The factor added is based on comparison of complete mineral trade value returns for selected countries with data given for these same countries in the source for table 4, which includes only the selected mineral commodity groups specified in the footnotes to that table. This comparison indicates that the recorded mineral commodities listed in table 4 represent about 81.5% of total mineral commodity trade.

Developing market economy countries continued to expand their output of mineral commodities for processing in the developed countries, as evidenced by the increase in both value and percentage of mineral commodity trade. The value of major mineral commodity trade contin-

[2] Excludes wood, charcoal, bagasse, animal dung, peat, and other minor fuels, although such fuels are used as commercial fuels in some countries, and a few nations account for a significant part of total energy consumption.

ued to expand for each of the various geographic sectors of the world, although the percentage of the total accounted for by each differed slightly from that of the previous year.

COMMODITY GROUP TRADE PATTERNS

The value of world export trade in major mineral commodity groups for the 5-year period 1968–72 is given in table 4. Table 5 gives the percentage of the total value of world trade in major mineral commodities accounted for by each major group, and table 6 records the growth in value of each major mineral commodity group from year to year. The value of world trade in mineral fuels continued to increase, and accounted for almost 50% of the total value of the major mineral commodity groups traded. The growth rate in this group was 16.1%, down from the 23.8% recorded the previous year, but still ahead of the other mineral groups. Iron and steel and crude nonmetals also continued to increase through the 5-year period shown, with iron and steel making up the second largest proportion of the total value of mineral commodities traded at 24.0%, down from the high of 25.0% recorded in 1970. The growth rate in iron and steel jumped substantially to 12.8%, up from 4.1% in 1971 but still well below the 24.6% growth rate recorded in 1970. Both the ores, concentrates, and scrap group and the nonferrous metals group rebounded from 1971 declines, increasing 6.5% and 11.6%, respectively. However, both of these mineral commodity groups also continued to account for a declining proportion of the total, falling to 9.2% and 13.9%, respectively, in 1972. From table 5 it can be seen that the mineral fuels commodity group continued to make up a growing percentage of the aggregate value of the major mineral commodity groups traded, a trend that undoubtedly will continue with sharp price rises, increased consumption levels brought on by an expanding population base, and energy shortages. Of the remaining four commodity groups, only crude nonmetals was unchanged, remaining at 3.5% of the total value of major mineral commodities traded.

Despite the increases recorded for the five major mineral commodity groups listed, the growth in value of the aggregate of these groups was again outpaced by the growth in value of all commodity groups traded. The growth in value of export trade of the aggregate of major mineral commodity groups increased 13.7%, compared with 18.7% for all commodity groups traded.

REGIONAL TRADE PATTERNS

World trade by geographic area and country of the major mineral commodity groups (metal ores, concentrates and scrap, iron and steel, nonferrous metals, nonmetals, and mineral fuels) in terms of dollar value in 1972 is given in tables 7, 8, and 9. Table 7 compares the aggregate of major mineral commodity trade by region with total commodity trade for these same regions in both value and percent. Table 8 gives origins and destinations for each of the major mineral commodity groups in terms of exports from and exports to the regions and countries indicated. Table 9 elaborates the data in the previous table by showing both source and destination for the aggregate of the major mineral commodities by the countries and regions shown in the stub and column heads of the table. Table 9 also aids in illustrating the relative self-sufficiency in or dependence upon mineral commodities by the regions selected.

The overall pattern of 1972 world trade in major mineral commodities in terms of developed and developing market economies and centrally planned economies is given in the following tabulation:

Destination [1]	Source of exports [1]				
	Market economy countries		Centrally planned economies	Undistributed [2]	Total
	Developed	Developing			
Value (million dollars):					
To market economy countries:					
Developed	32,940	27,210	3,120	−10	63,260
Developing	4,890	5,765	671	9	11,335
To centrally planned economy countries	1,894	586	5,390	5	7,875
Undistributed [2]	756	159	29	−14	930
Total	40,480	33,720	9,210	−10	83,400
Share of world total in percent:					
To market economy countries:					
Developed	39.5	32.6	3.7	([3])	75.9
Developing	5.9	6.9	.8	([3])	13.6
To centrally planned economy countries	2.3	.7	6.5	([3])	9.4
Undistributed [2]	.9	.2	([3])	([3])	1.1
Total	48.6	40.4	11.0	([3])	100.0

[1] Sources and destinations grouped according to United Nations practice; developed market economy countries are Australia, Austria, Belgium, Canada, Denmark, Finland, West Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, the Republic of South Africa, Spain, Sweden, Switzerland, Turkey, the United Kingdom, the United States, and Yugoslovia; centrally planned economy countries are Albania, Bulgaria, People's Republic of China, Czechoslovakia, East Germany, Hungary, North Korea, Mongolia, Poland, Romania, the U.S.S.R., and North Vietnam; developing market economy countries include all countries not specifically listed previously in this footnote.

[2] Figures represent difference between reported totals and reported detail. Explanations for negative quantities is not provided in source publication.

[3] Insignificant.

Every category reported separately in the value portion of the foregoing tabulation recorded a higher value than in 1971; however, the percentage distribution of the various economies remained relatively unchanged from those of 1971. Although the value of trade in major mineral commodities from developed market economies to all economies increased by $4,640 million in 1972, in terms of percent of the total value of world trade this increase remained unchanged. The most significant change in 1972 was the percentage increase in value of mineral commodities from the world to developed market economies at 75.9%, up from 75.0%. Although such percentage increases appear relatively small, they continue to support the trend of ever higher consumption levels by the developed market economies. This was also evidenced by the percentage of world trade in major mineral commodities from developing market economies to developed market economies at 32.6%, up from 31.8% in 1971. Receipts by developing market economies increased in value but again declined in percent of the total. Receipts by centrally planned economies remained at the previous year's level of 9.4%, while the percentage change in value of mineral exports from centrally planned economies to all economies decreased slightly to 11.0%.

In 1972, the proportion of trade in major mineral commodity groups to total trade of selected world areas varied considerably for the countries and regions listed. The Near East again took the lead with 85.7% of the total value of its exports accounted for by major mineral commodities. This was slightly below the previous year's share, as was the percentage of mineral commodities among total exports to that region. Other Africa ranked second in the share of mineral commodities among total commodity trade, showing an increase in the value of major mineral commodities exported from that region to 56.6% of all commodities exported.

The percentage of the total value of all commodities exported from Latin America declined to 36.2% from 42.3% in 1971. However, the value of the aggregate of major mineral commodities exported to that region more than doubled, and the value of nonmineral commodities was up over 78%. For "Not reported" areas, 72.8% of the total value of their exports were mineral commodities, compared with 44.7% the previous year. The United States again reduced the percentage of total

exports accounted for by mineral commodities, although the aggregate value of major mineral commodities increased. Both value and percentage of major mineral commodity groups imported by the United States rose in 1972. In Japan, mineral commodity imports as a percentage of the total declined from 41.3% to 38.0% in 1972, reflecting the continued recession in that country but still placing it ahead of all other regions and countries as the leading importer of major mineral commodities in terms of the percentage of total commodities imported. Centrally planned economy countries of Asia, along with the United States and the Republic of South Africa, had the lowest percentages of all commodities traded accounted for by mineral commodities. In the case of the Republic of South Africa, it should be remembered that the 9.2% of total listed trade made up by major mineral commodities excludes value data for gold, diamonds, and a variety of metals, the inclusion of which would considerably increase the value of mineral commodities exported by that country.

In table 8, value of world trade in each of the five major mineral commodities increased in 1972, with mineral fuels again having the largest value increase, up $5,440 million over 1971. The total value of exports of iron and steel increased $2,200 million to $20,040 million, with the major portion of the increase due to exports from the EEC, up $1,380 million over 1971. In the "Exports to" column, the areas and countries accounting for the major portion of the increase in trade in mineral fuels were the United States, up $1,332 million over the previous year, the EEC, up $1,860 million, and Latin America, up $1,810 million. The value of trade for centrally planned economy countries of Europe rose for each of the major mineral commodity groups, but centrally planned economy countries in Asia showed declines in each of the commodity groups exported to those areas. Although data continues to be excluded for several of the areas and commodities listed, it is presumed to be included under "Not reported." In addition, the value of gold moving in world trade continues to be excluded owing to the system of reported used, the Standard International Trade Classification Revised (SITC-R).

Sources and destinations for the aggregate of major mineral commodities in terms of major world areas and countries, as given in table 9, indicate the relative export-import position for those areas. In particular, comparison of total exports credited to each country or region (vertical grand total column) with total export receipts (horizontal grand total line) will indicate the position of each area as a net importer or net exporter of major mineral commodities. Except for Africa, centrally planned economy countries of the Far East and South Asia, and Australia and New Zealand, all areas showed increased exports receipts in 1972.

CONSUMPTION

NONFUEL MINERAL COMMODITIES

Despite the lack of world consumption data for many mineral commodities, it is reasonable to assume that consumption of most nonfuel mineral commodities increased in 1973, based on the performance of several major metals and nonmetals. Examination of these selected commodities indicates that consumption levels for all of them advanced over 1972 highs. Consumption of iron ore by 23 major world producers of pig iron (excluding the PRC), as given in table 10, reached 680.3 million tons. This figure, which is based on iron ore used in agglomerating plants, blast furnaces, and steelmaking, is 48.9 million tons or 7.7% above the 1972 level. U.S. consumption of iron ore was up 17.2%, while in Japan consumption rose 21.7 million tons, or 22.0%. The major nations of the EEC (which included the United Kingdon in 1973) increased consumption of iron ore by 6.8%. France accounted for the major portion of this increase, having raised iron ore consumption by 6.9 million tons. The centrally planned economy countries of Europe, which together made up over 31% of total consumption in 1973, raised their consumption level by 12.9 million tons. Though based in part upon estimates, the portion of total iron ore consumed that was used directly in steelmaking was again about 6 million tons. Of the remaining ore, approximately 48% was treated in

agglomerating plants prior to being fed to blast furnaces, and the largest portion (nearly 51%) was fed to blast furnaces and other facilities for production of pig iron and other products with or without agglomeration. The increase in the percentage of iron ore being treated in agglomerating plants indicates an increased use of lower grade iron ores as well as utilization of more efficient steel production techniques.

Iron and steel scrap consumption in 1973 amounted to over 295.7 million tons, nearly 19 million tons above the 1972 level. This is the highest consumption level of iron and steel scrap recorded, with scrap consumption by major steel producers up considerably. Table 11 gives iron and steel scrap consumption by 24 selected major countries subdivided into major economic groups. The United States remained the largest single consumer of iron and steel scrap of the countries listed with nearly 32% of the total, up 10.6 million tons from the previous year to a level of 94 million tons. Scrap consumption by Japan climbed 22.7% to 48.7 million tons while the U.S.S.R. was up only 2.9% at 46.3 million tons. Consumption by the EEC was up 6.3%, due in large measure to a consumption increase by West Germany of 7.3 million tons over 1972. Data for 1973 was not available for several countries, and lack of complete data necessitated the estimation of totals for certain others listed in the table. However, among the remaining countries listed, Canada recorded a 1.4-million-ton increase in iron and steel scrap consumption, which was 26.2% above that of the previous year.

Estimated world consumption of five major nonferrous metals is given in table 12. Consumption of all of the metals listed was up in 1973, with generally comparable rates of increase. Lead showed the largest percentage increase in consumption at 10.3% or 383,000 tons, and aluminum consumption was up 6.7% to 12.8 million tons. Copper consumption increased 8.1%, and zinc, 7.2%. These percentages represent quantitative increases of 642,000 tons and 370,000 tons for copper and zinc, respectively. Tin consumption continued to grow, jumping 16,000 long tons between 1972 and 1973, compared with a 3,000-long-ton increase between 1971 and 1972. The demand level for such mineral commodities was extraordinarily high in 1973, despite equally high price increases brought about in part by scarce energy supplies.

Data on world consumption of most nonmetallic mineral commodities continues to be unavailable. However, despite the lack of overall data, consumption of major commodities in this group, limestone, cement, and fertilizer materials, again advanced in 1973. Demand for sulfur increased again, despite the spread of pollution control regulation in major industrial countries. Consumption of sulfur was up 4.8% in 1973, an increase of 1.5 million tons over that of 1972. World consumption of nitrogen fertilizer for the 1972–73 fertilizer year (July 1, 1972, to June 30, 1973) was reported at 35.9 million tons, a 6.9% increase over that of the previous year. Phosphate consumption in terms of contained P_2O_5 increased from 22.0 million tons to 23.9 million tons, an 8.6% rise. Potash consumption in terms of K_2O equivalent for the 1972–73 fertilizer year was 18.9 million tons, a 5.6% increase over the previous year's total.[3]

MINERAL FUEL COMMODITIES

Consumption of mineral fuel commodities is reported in terms of consumption of the energy equivalent produced from the respective fuel. In 1972, the latest year for which worldwide reliable data is available, world consumption of mineral fuels, which include coal, oil, natural gas, and primary electric power (that power produced by means other than the burning of the aforementioned fossil fuels), amounted to 7,410 million metric tons SCE. This is a 4.6% increase over the 7,084 million tons SCE consumed in 1971. In terms of per capita consumption, an increase of 3.9% was registered in 1972, suggesting that the rate of worldwide growth in energy production is being exceeded by a more rapidly expanding population growth rate. Table 13 gives a detailed breakdown of energy consumption in terms of major energy source (solid fuels, liquid fuels, natural gas, and primary electric energy) and by continental divisions for the 5-year period 1968–72 as reported by the Statistical Office of the United Nations. Liquid fuels again in-

[3] British Sulphur Corp. Ltd. Statistical Supplement No. 4, November–December 1974, London, 1974.

creased their share of the aggregate of energy consumed in terms of SCE in 1972, rising to 43.5% of the total compared with 42.6% in 1971. Despite the quantitative increase in consumption of solid fuels, that energy source registered a smaller proportion of the aggregate, 32.5%, in 1972, compared with 33.7% the previous year. Consumption of natural gas and primary electrical power also increased quantitatively, but their percentage of the aggregate energy consumed remained relatively unchanged.

Comparison of the rates of growth in consumption of the various mineral fuel commodities between 1971 and 1972 indicates that the growth rate of primary electric power outpaced all other energy sources at 7.8%, but this source accounted for only 2.4% of the aggregate consumed in 1972. The growth in consumption of liquid fuels was 6.7%, compared with 5.8% for natural gas. Despite relatively rapid rates of growth over the past 5 years, consumption of natural gas continued to lag behind solid and liquid fuels at 1,603 million tons of SCE, or 21.6% of the aggregate.

Consumption of energy by market economy countries amounted to 5,261 million tons SCE in 1972, or 71% of the total world energy consumption. The distribution of the various energy sources in relation to their respective percentage of the aggregate varied considerably between market economy countries and centrally planned economies. In market economy countries, 51.2% of the total was accounted for by liquid fuels; 23.6%, by natural gas; 22.2%, by solid fuels; and the remainder, primary electricity. This compares with 24.4% by liquid fuels, 16.7% by natural gas, 57.7% by solid fuels, and 1.2% by primary electricity for centrally planned economy countries. The difference in the proportion of the aggregate accounted for by the various mineral fuel commodities by the two types of economies is due partly to the emphasis placed upon pollution control by market economy countries and partly because of the ready availability and lower cost of coal in centrally planned economy nations. Regionally, those areas with historically low cosumption levels experienced the largest percentage growth in consumption of aggregate fuel sources. Africa and the Near East increased aggregate consumption 9.8% and 8.0%, respectively, between 1971 and 1972, but Other America increased consumption by only 3.3%. In Western Europe, consumption of solid fuels declined for the third straight year, but consumption of natural gas was up 26.4%. Liquid fuels utilization was up 5.6%, and consumption of this energy source made up 57.9% of the aggregate in 1972. The centrally planned economy nations of Europe recorded a 4.8% increase in aggregate mineral fuel consumption. Of the total for this area, liquid fuels consumption, at 482 million tons SCE, was 8.1% above the 1971 level.

Per capita consumption increased for all regions listed except the Far East, which declined slightly. Developed market economies as a group continued to maintain the highest per capita consumption, again over 4 times that for centrally planned economies.

INVESTMENT

Worldwide mineral industry investment continued to expand in 1973 but with a major shift in emphasis on the areas involved. Comprehensive data on all such investment is not available, but figures for petroleum industry and iron and steel industry investment, as well as detailed geographic mineral industry investment by the United States, reflect this growth pattern. Information continues to be lacking on comparable mineral industry investment data for the centrally planned economy nations, which include the U.S.S.R., the PRC and a number of East European countries. However, although annual mineral industry investment data is rarely, if ever, published, announcements of major expansion plans and trade or cooperative agreements do indicate a general trend of substantial continued mineral industry upgrading or growth.

Annual investment expenditures in the steel industry for selected countries for 1971 and 1972, the latest years for which such data are available, is given in table 14. Total expenditures of $7,997 million in 1972 represent an increase of 3.6% over the revised 1971 total of $7,721 million, considerably smaller than the 23.2% increase between 1970 and 1971. Italy and

France continued to expand steel industry investment in 1972 in the amounts of $266 million and $340 million, respectively, while the other members of the EEC reduced their levels of investment. However, the decline of the latter was more than offset by the investment by Italy and France, giving the EEC the largest percentage of total steel industry investment in 1972 among the country or country groups listed. The European Free Trade Association (EFTA) increased steel industry investment 27.5%, with all members of the association listed having increased steel industry outlays in 1972 over 1971. Investment by two major steel producers, Japan and the United States, declined in 1972, the latter for the fifth straight year. Japanese steel industry investment was down nearly 5% while that of the U.S. steel industry fell almost 18%.

Expenditures by market economy countries in terms of capital investment and exploration expenses in the petroleum industry for 1971, 1972, and 1973 are given by geographic area in table 15, and by industry sector and type of expense in table 16. The total of both capital expenditures and exploration expenses for petroleum increased 19.7%, or $5,205 million from 1972 to 1973. The distribution of these expenditures in market economy countries for 1972 and 1973 is given in the following tabulation by area in percent of the total:

Area	Percent of total	
	1972	1973
United States	37.0	36.3
Other Western Hemisphere	12.7	11.3
Western Europe	17.3	15.8
Africa	4.5	3.5
Near East	3.9	4.5
Far East	10.9	8.3
Unspecified	13.7	20.3
Total	100.0	100.0

Although the percentage of the total accounted for by the United States declined slightly in 1973, that country continued to have the largest percentage of the total amount invested. Of the areas listed, only the Near East and unspecified areas increased their share of the total, with the latter rising to 20.3% in 1973 from 13.7% in 1972.

Table 15 shows that expenditures for petroleum capital investment increased for every area listed except Africa, off 3%, and the Far East, down $290 million or 10.7%. Exploration expenses were up for every area except Africa, which declined nearly 29%, and the Near East, which remained at its 1972 level. The United States, which accounted for the largest percentage of the $31,695 million invested in 1973, had an increase in total expenditures of over 17%, mainly for capital investment. Western Europe had expanded capital expenditures of 8.4%, while exploration expenses increased $50 million or 40%, but from a relatively small base. The Near East continued extensive expansion of its petroleum industry, with investments of $415 million, or 43% more in 1973 than in 1972 in capital expenditures. Particularly significant was the continued vast increase of investment in tanker construction, listed separately as unspecified and not distributed regionally. Total market economy investment in 1973 in tanker construction was $6,450 million, nearly 77% or $2,800 million above the 1972 level.

Market economy country petroleum industry investment by industry sector, as shown in table 16, indicates that expenditures for production of crude oil and natural gas continue to outpace all other sectors. In 1973, expenditures for that industry sector were up $2,825 million, or 29.5% over 1972, for a total of $12,415 million. The marine sector, which includes expenditures for tanker construction, was the second largest sector of investment expansion at $6,550 million, nearly 74% above the 1972 level. Excluding the two industry sectors mentioned previously, all other areas of capital investment declined except for those listed as "Other", which increased 8.5%, and pipeline investment, which remained stable. Most significant of the sectors of investment decline were marketing and chemical plants, which fell $345 million and $175 million, respectively, in 1973.

Preliminary figures for 1973 and revised data for 1972 regarding U.S. direct foreign investment in mineral industries is given in table 17. Total U.S. investment in mining, smelting, and refining increased 5.3% to $7,483 million, while earnings and income increased substantially from depressed 1972 levels. Canada continued to be the primary country of U.S. mining investment with 50% of the total value invested, while the Republic of South Africa and Australia showed investment

increases of $21 million and $82 million, respectively, in 1973. However, despite the 15.3% growth in value of investment in the Republic of South Africa, mining investment activity in the African continent declined 2.5%. Value of investment in Chile remained stable at $359 million in 1973 after a decline of almost $100 million between 1971 and 1972. Total direct U.S. investment in the petroleum industry in 1973 was valued at $29,567 million, up 12.6% from 1972. The largest percentage of this total was accounted for by Europe, where the value of U.S. investment was $8,387 million, up 22.4% over the previous year. The EEC, excluding its newer members Denmark, Ireland, and the United Kingdom, showed an increased investment of $1,031 million for a total of $4,394 million. Investment in the Canadian petroleum industry was up 10.6% but declined 13.4% in Venezuela and 7.7% in Africa. The Near East increased its U.S. investment level by $610 million, and international shipping was up 17.3%. Preliminary data indicates that the value of U.S. earnings in petroleum were up 86.7% in 1973 to a new high of $6,183 million, while income increased 53.0% to $4,325 million.

TRANSPORTATION

MARINE TRANSPORT

The transport of mineral commodities is accomplished by oceangoing vessels from three major classes: Tankers, bulk carriers, and freighters. The distribution of these vessels in terms of number of vessels, gross tonnage, and deadweight tonnage for the 5-year period 1969–73, as derived from a U.S. Maritime Commission report, is given in table 18. All vessels in all categories showed an increase in 1973 over 1972 except for gross tonnage of vessels classified as "Other," which declined less than 1.0%. It should be noted, however, that all vessels in each of these classes are not involved wholly or even partly in transporting mineral commodities. Tankers transport crude oil, natural gas, and refinery products but also move chemicals and products such as molten sulfur and whale oil. Bulk carriers, while heavily engaged in the transfer of metal ores, cement, and fertilizers, also move large quantities of bulk agricultural products. Freighters are not generally engaged in mineral commodity shipments but nonetheless move metal products as well as some ores and concentrates.

The relative movement of mineral commodities may be illustrated by world shipment of tanker and dry cargo by loadings and unloadings for the 5-year period given in table 19. Total world shipping increased 11.3% for a record 3,190 million tons. Separately, tanker cargo loadings increased 11.9%, and dry cargo loadings were up 10.5%.

Regional patterns of tanker and dry cargo movement by loadings and unloadings are given in tables 20 and 21, respectively. Tanker cargo unloadings continued to increase for major developed market economies, spotlighting the domestic shortages that developed in 1973. The United States showed unloadings of an additional 74 million tons for a 35.9% increase over the previous year's level, while Western European countries and Japan were up 8.5% and 13.7%, respectively. Canada and the Republic of South Africa also increased unloadings of tanker cargo but from a considerably smaller base. Developed market economies as a group increased loadings 9.1%, with nearly all of the increase coming from additional loadings of crude and refined products from Western Europe. Among the developing market economy countries the pattern was as expected with major petroleum producers showing increased loadings of tanker cargo. Tanker loadings in the Near East were up 17.8%, exceeding 1 billion tons for the first time, and Venezuela, despite declining production of petroleum for several years showed increased loadings of 3 million tons in 1973. The U.S.S.R. had equivalent amounts of tanker cargo being loaded and unloaded from its ports, with total unloadings for centrally planned economy nations up 18.5%. As regards world shipping of dry cargo, the regional pattern in 1973 was generally the same as that of the previous year. A major exception was the decline of nearly 4% in loadings of dry cargo in Western Europe, the first decline since 1967, which was the first year covered by this series of tables. The United States

increased loadings of dry cargo by 19.8%, while Australia and New Zealand were up 15.7%. The major regions or countries having substantial unloadings of dry cargo were Western Europe, Japan, and the United States, up 8.6%, 13.8%, and 5.2%, respectively, in 1973. Developing market economy countries raised the level of loadings 15.8%, or 60 million tons. The Far East and Other Latin America, which accounted for over half of the total cargo unloaded in developing market economies, were up 18.5% and 26.5%, respectively.

Data are not available on the percentage of total world commodity movement accounted for by mineral commodities, but it is possible to gain a general indication of such by observation of commodity traffic through the Panama Canal. In 1973, 55.6% by weight of all cargo transiting the Panama Canal consisted of mineral commodities. From this amount, it may be inferred that mineral commodities account for an even larger share of total world commodity movement because of the increasing tonnages of crude oil and refinery products moving by tankers and bulk carriers incapable of traversing the canal because of their size.

Regarding the number and size of vessels involved in mineral commodity movement, by yearend 1973 the world merchant fleet [4] numbered 21,600 vessels with a gross tonnage of 275,927,000 tons and a deadweight tonnage of 446,370,000 tons, increases of 2.8%, 10.1% and 11.7%, respectively, over 1972 totals. These percentages indicate continued increased growth rates in vessel numbers and capacity, although the rates varied markedly for the type of vessel. Bulk carriers had the highest percentage growth rate in both number of vessels and tonnage, with tankers a close second. Freighters, although having the lowest rate of growth of any vessel class in numbers, remained the most numerous class of vessel, totaling 11,170, or nearly 52% of the total. Vessels classified as other (passenger-cargo, passenger-refrigerated cargo, and refrigerated freighters) increased slightly in number and deadweight tonnage.

Tankers.—In 1973 the number of tankers increased by 232 vessels or 5.1%, but the additional vessels resulted in a 12.7% increase in gross tonnage and 14.3% increase in deadweight tonnage, indicating that many of these vessels were again in the supertanker class. Overall, the result was that the average size of tankers was increased in 1973 to 25,425 gross tons and 45,809 deadweight tons. Comparable figures for 1966 were 16,343 gross tons and 25,768 deadweight tons, respectively. Table 22 further illustrates the distribution of world oil tanker tonnage by size group for 1973, with 1966 data for comparison. By yearend 1973, the total world tanker fleet in service amounted to 220.0 million deadweight tons, with a record 197.6 million deadweight tons in progress or on order. Of the total tonnage in service, 38.5% was in the 205,000-deadweight-ton size class or over, an increase of 36.4% over the same size classes in 1972. Although there continued to be a massive increase in the larger size tankers, growth still continued in size classes 25,000 to 45,000 tons and 65,000 to 125,000 tons owing to port limitations in a number of countries. The United States, with a maximum allowable vessel size of 80,000 tons, will continue to rely on smaller tankers, barring construction of deep sea terminals. If and when all vessels in progress or on order are completed, and discounting reductions in tonnage due to scrapings, losses, or other deletions from the fleet, the total tanker fleet will come to 417.6 million tons, with nearly 55% by weight in ships over 205,000 tons. The draft of many of these vessels will preclude their deployment on some established shipping routes, necessitating the use of smaller tankers for transfer of crude oil and refinery products. The possible reopening of the Suez Canal, while reducing the distance between the Persian Gulf and European markets, is unlikely to seriously limit the use of very large carriers due to the magnitude of the volume of trade presently taking place.

The rapid buildup of very large tankers has resulted in the virtual replacement of a large percentage of the fleet. The following tabulation gives the percentage of total tonnage in terms of the year of

[4] Oceangoing steamships and motorships of 1,000 gross tons and over.

completion of vessels classified as tankers in 1972 and 1973:

Year of completion	Percent of total tonnage	
	1972	1973
Up to yearend 1945	2.7	2.1
1946–50	1.1	.9
1951–55	6.5	5.5
1956–60	15.2	13.4
1961–65	18.2	15.9
1966–70	34.8	30.5
1971–73	21.5	31.7

Source: British Petroleum Co. Ltd. BP Statistical Review of the World Oil Industry—1972 and 1973. Bayard Press, London, 1972, 1973, p. 14.

A breakdown of the world tanker fleet at yearend 1973 in terms of flag of registry ranked in order of national aggregate deadweight tonnage follows:

Country	Number of vessels	Deadweight tonnage (thousand tons)
Liberia	864	59,684
Japan	485	27,694
United Kingdom	442	26,924
Norway	349	21,941
Greece	308	12,201
France	137	9,731
United States	274	8,636
Panama	209	7,995
Italy	220	5,915
U.S.S.R	454	5,532
Sweden	75	4,097
Denmark	57	4,120
Spain	110	3,900
Netherlands	81	3,420
Other	748	18,691
Total	4,813	220,481

Bulk Carriers.—The world bulk carrier fleet increased by 261 vessels, or 7.4% in 1973. The growth rate of bulk carriers in both gross tonnage and deadweight tonnage also exceeded that for all other types of vessels. In terms of gross tonnage, the increase was 15.2% to 74,660,000 tons, for an average bulk carrier weight of 19,647 tons compared with 18,317 tons in 1972. Deadweight tonnage increased 16.3% to 126,140,000 tons, for an average deadweight tonnage per vessel of 33,195 tons in 1973 compared with 30,662 tons in 1972. The high rate of increase in bulk carriers continued from the previous year reflected the importance of ore carriers and large combinations (ore-oil-other material) carriers in variable market conditions. Although the Maritime Commission data does not distinguish mineral commodity oriented bulk carriers from those engaged in agricultural trade, other sources indicates that at yearend 1973, 11.0 million deadweight tons of combined carriers were in building progress or on order, compared with 16.8 million tons at yearend 1972. Information is not available as to the total number of these vessels currently in service, but it may be assumed that a substantial number of those in the building stage or on order at yearend 1972 were completed.

The total number of bulk carriers in service under the major flags of registry, ranked in order of aggregate deadweight tonnage for 1973, is indicated in the following tabulation:

Country	Number of vessels	Deadweight tonnage (thousand tons)
Liberia	787	30,200
Japan	530	20,978
Norway	344	15,702
United Kingdom	330	12,938
Greece	412	11,215
Italy	141	5,236
Sweden	79	3,706
Germany, West	75	3,675
Panama	146	2,513
India	52	1,992
France	57	1,851
Spain	50	1,390
U.S.S.R	145	1,268
Poland	60	1,051
Denmark	30	870
United States	26	617
Other	536	10,938
Total	3,800	126,140

Freighters.—Freighters are the major ocean carriers of processed mineral commodities, particularly metal smelter and mill products. At yearend 1973, the number of freighters had risen to 11,170 vessels, with a gross tonnage of 66,790,000 tons, up 2.5%, and a deadweight tonnage of 90,511,000 tons, up 1.8%. In terms of percentage of the world's merchant fleet, freighters accounted for 24.2% of the aggregate gross tonnage and 20.3% of the aggregate deadweight tonnage, both percentages representing slight declines from the previous year's proportion. However, demand for freighter shipments continued to increase as evidenced by the rise in shipment of finished and semifinished metal products through the Panama Canal.

Freighters also gained in average vessel size, increasing from 5,879 gross tons and 8,025 deadweight tons in 1972 to 5,979 gross tons and 8,103 deadweight tons in 1973.

The following tabulation lists the principal nations of registry of freighters in

order of their share in the aggregate deadweight tonnage of the total world freighter fleet at yearend 1973:

Country	Number of vessels	Deadweight tonnage (thousand tons)
Greece	900	8,417
U.S.S.R	1,337	8,299
Japan	1,004	8,159
United States	587	7,400
United Kingdom	662	6,297
Liberia	495	5,026
Panama	696	4,453
Germany, West	504	4,153
Cyprus	414	2,973
Norway	347	2,909
Netherlands	287	2,409
India	185	1,962
Other	3,752	28,054
Total	11,170	90,511

PANAMA AND SUEZ CANALS

The number and type of vessel, as well as the nature of the cargo moved, pointed up several significant trends in ocean traffic transiting the Panama Canal in 1973. Although the number of transits was down from the levels reached during the height of the Vietnam conflict, cargo tonnage moved increased 14.8% to 129,609,000 tons. Vessels of increased size and capacity transited the canal in reduced number of transits, with traffic in general recovering somewhat from the 1972 level, which had been depressed, at least in part, by the Japanese recession and labor strikes. The appearance of larger vessels within the capacity limits of the canal supported the worldwide trend to increased use of container ships as well as larger bulk carriers and tankers. The percentage of total cargo moved in 1973 that consisted of mineral commodities was 55.6%, or 72,041,000 tons, down slightly from 55.8% in 1972. However, although the portion of the total accounted for by mineral commodities was down, mineral commodity tonnage as a group increased 9,053,000 tons, or 14.4%, over that of 1972. Mineral commodity movement and its importance in Panama Canal activity is summarized in the following tabulation:

	Fiscal years		
	1971	1972	1973
Number of transits:			
Commercial ocean traffic	14,020	13,766	13,841
Other traffic	1,328	1,432	1,268
Total	15,348	15,198	15,109
Cargo moved (thousand metric tons):			
Commercial ocean traffic:			
Mineral commodities	72,561	62,988	72,041
Other commodities	47,969	47,999	56,087
Subtotal	120,530	110,987	128,128
Other traffic, all commodities	2,422	1,873	1,481
Total	122,952	112,860	129,609

A breakdown of commercial ocean traffic through the canal for the years 1972 and 1973, in terms of vessel type, cargo tonnage, number of transits, direction of movement (Atlantic to Pacific, Pacific to Atlantic), and by the status of the vessel (in ballast or laden) is given in table 23. Table 24 gives specific mineral commodities and commodity groups by direction of movement over a 3-year period.

The major portion of the total cargo moved through the canal was carried by bulk carriers, with tonnage moved by these vessels up 17.4%. No ore ships transited the canal in 1973, and although the number of transits of tankers declined by 6.0%, the tonnage moved was up 23.4%, with Atlantic-bound traffic showing over twice the tonnage shipped in 1972. Mineral commodity traffic from the Atlantic to the Pacific accounted for over 60% of the total mineral tonnage shipped. Iron and steel semimanufactures, petroleum, and coal and coke continued to be the major mineral products moved. Shipment of iron and steel was up 5.4%, with most of the traffic from Japan to the United States and Western Europe. Coal and coke shipments continued to decline in 1973, despite the increase in Japanese demand for coking coal. This was partly a result of Australia and Canada supplanting the United States as a supplier of coal but

also because an estimated 2.5 million tons from the United States bypassed the canal, using the Cape of Good Hope route to Japan. Shipment of crude oil from the Pacific to the Atlantic was up by nearly 4 times the 1972 level, while movement of refinery products increased almost 58%. Shipment of metal scrap for all metals also increased substantially from a total of 1,472,000 tons in 1972 to 3,303,000 tons in 1973, the increase primarily a result of Japanese demand. Other mineral commodities showing significant change in the tonnage moved were copper ore and concentrate at 603,000 tons shipped, up from 280,000 tons; zinc ore and concentrate at 785,000 tons, up from 515,000 tons; and sulfur at 1,107,000 tons, up 40.5% from 1972.

Although the Suez Canal remained closed for the sixth straight year, plans were underway for its eventual reopening and possible widening and deepening. With its continued closure, very large tankers moved most of the crude from the Persian Gulf to European markets by way of the Cape of Good Hope shipping route, and shipments also moved overland by pipeline from the producing areas to Eastern Mediterranean ports. As world markets have expanded significantly from the time of the initial closure of the canal, reopening may not drastically affect the utilization of supertankers by virtue of the enormous quantity they are capable of moving in a single shipment to meet present heavy demands. But it can be expected that, as in the case of the Panama Canal where tankers and bulk carrier size has edged up to the limit of the canal's capacity, so also will the Suez Canal see substantial traffic, particularly in petroleum products produced in Near East refineries.

OCEAN FREIGHT RATES

Available information indicates that rates for ocean freight jumped dramatically in 1973 as the energy crisis increased in tempo. The cost for haulage of cargo pushed rates well above their previous highs in 1970, as shown by United Nations indexes in table 25. Analysis of ocean freight rates for 1973 also showed increases of from 34.6% to nearly 3 times those registered in 1972. Increases were recorded for every consecutive quarter for each country and category listed except for West German and Norwegian tanker rates, which declined in the fourth quarter, and Italy, for which information was not available.

PIPELINES

Although 1973 was the year of the tanker due to substantial and rapid increases in demand for energy by the world's expanding economics, planned oil and gas pipeline construction continued generally unabated. Despite the general unavailability of complete worldwide summaries of existing pipeline systems, several projects of international significance in 1973 are highlighted in the following section.

The North Sea was a major development area following extensive discoveries of oil and gas offshore Norway and the United Kingdom. Construction on a 270-mile, 34-inch crude oil line from Ekofisk to Teesside, United Kingdom, was begun in May, following settlement of a participation agreement between the oil companies involved and Norway. Participants involved in a 36-inch crude line extending 130 miles from Cruden Bay to the Grangemouth refinery received authorization to begin construction in early 1973, with completion expected in late 1974. The 32-inch line from the Forties Field to Cruden Bay was due for completion in November 1973. A buyers consortium composed of West Germany, the Netherlands, Belgium, and France was scheduled to begin receiving gas in late 1975 from a 250-mile, 36- to 42-inch pipeline from Ekofisk to Emden, West Germany. In Europe itself, the Druzhba II line, extending 2,796 miles from the Ural-Volga region and paralleling Druzhba I, was completed, with design work for Druzhba III presently underway. Druzhba II is now also linked with the 1,140-mile crude line from Ust Balyk in Western Siberia, from which oil will be supplied to Poland, East Germany, Czechoslovakia, and Hungary.

In Italy, attempts are being made to greatly diversify energy sources. In addition to possible construction of a major pipeline from the Hossi R'Melgas Fields in Algeria, construction continues on Europe's largest natural gas pipeline from Bocholtz in the Netherlands to Mortara in northern Italy. A line from the northeast across Europe from the U.S.S.R. is also underway. This line, extending about 480 miles, is to cross Czechoslovakia to Baumgarten on the Austrian frontier.

In the Near East, general survey and feasibility studies have been completed in Iraq regarding the planned construction of a major crude oil pipeline. Agreement has been reached between Iraq and Turkey for the laying of a 560-mile, 40-inch pipeline to link Kirkuk with the Mediterranean port of Dortyal in southern Turkey. A strategic pipeline extending over 400 miles is also to join North Rumaila with Haditha on the Kirkuk-Mediterranean pipeline network. It will consist of two parallel lines and will be able to carry either Kirkuk crude to the Persian Gulf or North Rumaila crude to the Mediterranean. A deepwater tanker terminal to be built in the Gulf will have two 25-mile, 48-inch submarine pipelines. Iran is continuing construction of a 680-mile gas pipeline to the U.S.S.R., paralleling the existing 40 to 42-inch Bid Boland to Astara line, which has been in operation since 1970.

In the Western Hemisphere, court injunctions again resulted in postponement of construction on the 789-mile, 48-inch crude oil pipeline from the north slope of Alaska to a southern port terminal despite considerable precautions being taken to limit the destructive impact of an oil spill. However, in spite of the delays in laying the oil line, a study is underway for construction of a gas pipeline from the North Slope to a liquefaction plant on the south coast. Liquefied natural gas tankers would then move the gas to the west coast of the United States.

Studies are still underway regarding the transport of gas from the Mackenzie Delta in Canada to consumers in the United States. Preliminary review has also been completed on a 602-mile, 42-inch underground crude pipeline from Canada into New York State, paralleling the south shore of the St. Lawrence River to Oswego and Buffalo. Capacity of the line has been put at 500,000 barrels per day.

In Bolivia, plans have been revived regarding the feasibility of a 1,242-mile natural gas pipeline from the Santa Cruz Fields to São Paulo, Brazil. Gas originally destined for that country is now being exported to Argentina. Brazil also plans to move gas from offshore fields near Aracaju to a natural gas plant in Bahia by way of a 143-mile, 14-inch pipeline. The pipeline, presently underway, is scheduled for completion in May 1974. Ecuador will be selling newly developed crude oil to Colombia via the under-utilized Colombian trans-Andean pipeline. A 40-mile spur will be needed to connect the Andean line.

PRICES

In 1973 the average price of several major mineral commodities staged a dramatic advance. This was in line with general price increases for most mineral commodities, particularly as demand for fuels increased during the energy crisis. World production of raw steel in 1973 was up 10% over 1972 output, and although detailed information is not available on average world price levels for steel and other mineral commodities such as crude oil and petroleum refinery products, it is reasonable to assume that increases again occurred.

The average annual price of several major nonferrous metals for the 3-year period 1971–73 for the United States, the United Kingdom, and Canada is given in tables 26, 27, and 28, respectively, with average monthly prices for these same commodities for 1973. It can be seen from these tables that the average annual price of copper, lead, zinc, tin, and silver increased substantially from 1972 levels for all three countries. The only exception to this trend was aluminum, where prices fell for the third straight year in the United States and the United Kingdom, off 5.3% and 1.0%, respectively. Canadian aluminum producers ceased quoting a published price in 1972. Zinc prices were up 16.4% in the United States, 26.3% in Canada, and well over twice the 1972 price in the United Kingdom. U.S. zinc prices climbed steadily through the first 5 months, falling slightly in June. Prices then fluctuated mildly until December when a price jump of 34.5% was registered. Zinc prices increased throughout the year in the United Kingdom, with the largest rise in the final quarter. Canadian zinc price increases, while not as dramatic as for the United Kingdom, nonetheless rose steadily throughout the year except for a very slight drop in May. In the case of copper, the average annual price rose 66.5% in the United Kingdom, well ahead of the 16.3% and 24.1% increases in U.S. and

Canadian markets. United Kingdom copper prices rose throughout 1973 except for declines in May, September, and December. U.S. prices increased through April, then remained steady until November when they rose again, ending higher in December. Canadian copper prices were up in the first quarter and, despite several declines of minor significance, continued the year generally upward before falling off slightly in December. Lead prices rose on all three markets; the United Kingdom had a 41.7% increase over the 1972 level. A strongly defined upward trend continued throughout the year, except for a decline in August. The U.S. price of lead fell at the start of the year but then moved upward during the next 5 months, holding steady until December when the price increased again. The Canadian lead market was more erratic as prices rose in the first quarter, then declined 2 months before a slight increase in June, fell during the third quarter, then moved up before leveling off in December. Tin prices were up 28.7% in the United States and 27.7% in the United Kingdom. The pattern of price performance was generally the same in both countries, with price increases throughout the year except for declines in April and September. The price of silver gained on both U.S. and United Kingdom markets, increasing slightly over 50% for both.

The United Nations mineral commodity export price indexes and an analysis of export price indexes are given in tables 29 and 30. The overall crude minerals export price index indicates a jump of 40 index points, or 28.4% over 1972. Increases were made every quarter, ending at a high of 241 (1963=100). Separate export price indexes for metal ores and fuels showed gains of 20.2% and 31.5%, respectively. These two mineral commodity divisions had increases through each consecutive quarter of 1973, with the largest increase shown in the last quarter of the year.

Examination of the analysis of the export price indexes table indicates that the export price index of both developed and developing areas increased dramatically. The index of all minerals in developing areas was up 31.9% to a new average annual high of 178 index points. The index for nonferrous base metals for developing areas jumped 91 points to an annual average of 252, up 56.5%. Increases were recorded for each consecutive quarter of 1973 for the commodity groups listed. Export price indexes for developed areas were up 24.0% for all minerals and 38.0% for nonferrous base metals. As in the case of developing areas, the export price indexes were up for every quarter listed. The fourth quarter index figures are the highest yet recorded for export price indexes.

STATISTICAL SUMMARY OF WORLD PRODUCTION AND TRADE OF MAJOR COMMODITIES

The final 30 tables of this chapter (tables 31 to 60) extend the statistical series that was started in the 1963 edition of the International Area Reports volume of the Minerals Yearbook and that was then updated in the 1965, 1967, and subsequent editions up to 1972. They are primarily a supplement to other statistical data within this chapter but also serve as a summary of international production and trade data for major commodities covered in greater detail on a commodity basis in Volume I of the 1973 Minerals Yearbook and on a country basis in Volume III.

The data presented here on production (tables 31 to 49) in most instances represent the most accurate figure available at the time of compilation of this chapter, which was subsequent to the completion of all commodity and country chapters. Because of this, they may differ from data presented in this volume in the country chapters (where a more reliable figure became available after the country chapter was completed) and/or from the metric unit equivalent of data presented in Volume I (where a more reliable figure became available subsequent to the completion of the commodity chapter).

The data on world trade in major mineral commodities presented in this chapter (tables 50 to 60) may not correspond exactly to that presented elsewhere in the Minerals Yearbook because these summary tables are compiled from sources other

than those used in the individual country chapters in order to obtain data on a consistent basis. The differences, however, are regarded as unimportant from the viewpoint of displaying the general pattern of trade in these commodities.

Table 1.—United Nations indexes of world [1] mineral industry production
(1963=100)

Industry sector and geographic area	1971	1972	1973	1973 by quarters 1st	2d	3d	4th
EXTRACTIVE INDUSTRIES							
Metals:							
Non-Communist world	134	132	138	134	140	137	140
Industrialized countries [2]	133	129	136	131	140	135	139
United States and Canada	129	126	138	127	144	140	140
Europe	126	126	127	130	131	116	131
European Economic Community [3]	86	83	77	88	76	68	75
European Free Trade Association [4]	149	146	153	160	162	127	163
Australia and New Zealand	206	214	222	202	224	220	242
Less industrialized countries [5]	136	136	141	139	140	139	143
Latin America [6]	141	143	147	141	148	146	152
Asia [7]	143	143	147	149	147	143	150
Communist Europe [8]	202	213	229	232	227	229	226
World	149	150	158	156	160	157	159
Coal:							
Non-Communist world	87	82	82	87	82	77	81
Industrialized countries [2]	85	79	78	83	79	74	78
United States and Canada	117	123	123	122	121	122	128
Europe	73	62	62	69	63	56	60
European Economic Community [3]	71	60	60	68	61	54	58
European Free Trade Association [4]	61	61	59	64	57	59	57
Australia and New Zealand	159	172	177	159	180	195	172
Less industrialized countries [5]	124	126	129	134	130	126	127
Latin America [6]	152	150	151	NA	NA	NA	NA
Asia [7]	121	122	126	130	128	123	125
Communist Europe [8]	128	130	135	137	132	132	137
World	104	102	104	108	103	100	105
Crude petroleum and natural gas:							
Non-Communist world	175	188	199	197	196	202	201
Industrialized countries [2]	141	151	151	158	148	147	154
United States and Canada	131	136	136	137	134	135	138
Europe	276	321	342	395	324	291	357
European Economic Community [3]	318	376	398	469	376	333	416
European Free Trade Association [4]	NA	NA	NA	NA	NA	NA	NA
Australia and New Zealand [9]	--	--	--	--	--	--	--
Less industrialized countries [5]	210	226	248	239	246	258	249
Latin America [6]	118	112	116	113	116	118	118
Asia [7]	225	254	294	281	287	311	295
Communist Europe [8]	187	198	212	215	214	211	208
World	178	190	202	201	200	204	203
Total extractive industry:							
Non-Communist world	144	148	157	155	157	157	159
Industrialized countries [2]	122	123	127	127	127	124	129
United States and Canada	127	131	135	132	135	135	138
Europe	108	105	109	116	110	101	110
European Economic Community [3]	104	101	104	113	105	96	104
European Free Trade Association [4]	128	125	131	134	135	119	137
Australia and New Zealand	176	184	190	172	192	197	200
Less industrialized countries [5]	190	202	221	214	219	227	223
Latin America [6]	125	122	126	121	125	126	NA
Asia [7]	211	237	272	263	267	285	274
Communist Europe [8]	165	174	185	189	186	183	184
World	150	157	166	166	166	166	167
PROCESSING INDUSTRIES							
Base metals:							
Non-Communist world	144	157	178	174	180	173	183
Industrialized countries [2]	142	155	175	173	178	171	180
United States and Canada	120	133	150	150	154	144	149
Europe	141	150	165	162	167	159	172
European Economic Community [3]	135	141	154	152	156	149	160
European Free Trade Association [4]	151	160	169	170	174	152	182
Australia and New Zealand	139	153	172	162	160	181	184
Less industrialized countries [5]	175	193	209	199	198	209	229
Latin America [6]	190	208	224	205	214	225	251
Asia [7]	152	171	191	196	177	190	200

See footnotes at end of table.

Table 1.—United Nations indexes of world [1] mineral industry production—Continued
(1963=100)

Industry sector and geographic area	1971	1972	1973	1973 by quarters 1st	2d	3d	4th
PROCESSING INDUSTRIES—Continued							
Base metals—Continued							
Communist Europe [8]	173	183	194	196	194	194	191
World	153	165	182	181	184	179	185
Nonmetallic mineral products:							
Non-Communist world	147	158	171	159	176	175	174
Industrialized countries [2]	142	152	165	152	171	168	167
United States and Canada	123	133	145	134	150	151	146
Europe	152	160	170	157	178	172	176
European Economic Community [3]	145	153	161	149	161	163	163
European Free Trade Association [4]	157	165	173	163	179	169	181
Australia and New Zealand	143	150	163	147	159	172	175
Less industrialized countries [5]	188	203	223	200	224	230	229
Latin America [6]	195	210	233	225	228	238	239
Asia [7]	184	195	214	196	221	221	217
Communist Europe [8]	196	210	226	224	231	222	228
World	166	177	192	183	197	192	194
Chemicals, petroleum, and coal products:							
Non-Communist world	196	214	237	229	237	235	245
Industrialized countries [2]	196	214	237	230	239	235	245
United States and Canada	180	200	217	209	219	220	221
Europe	203	219	246	243	248	234	259
European Economic Community [3]	200	212	240	237	241	229	252
European Free Trade Association [4]	199	213	228	225	231	211	243
Australia and New Zealand	193	208	234	211	239	253	234
Less industrialized countries [5]	191	210	232	222	225	235	247
Latin America [6]	198	215	239	NA	NA	NA	NA
Asia [7]	188	210	229	226	216	227	246
Communist Europe [8]	240	265	301	298	305	301	300
World	205	224	250	243	251	248	256
OVERALL INDUSTRIAL PRODUCTION							
Non-Communist world	155	166	182	178	182	179	190
Industrialized countries [2]	152	163	179	175	179	175	186
United States and Canada	142	153	168	164	169	169	170
Europe	152	159	172	172	173	160	184
European Economic Community [3]	147	153	166	166	166	154	176
European Free Trade Association [4]	156	164	172	169	174	158	186
Australia and New Zealand	150	159	173	161	171	183	177
Less industrialized countries [5]	178	193	211	200	209	214	222
Latin America [6]	172	185	200	NA	NA	NA	NA
Asia [7]	178	196	219	213	212	222	229
Communist Europe [8]	191	206	225	227	227	221	224
World	165	177	194	191	195	191	199

NA Not available.
[1] Excludes Albania, the People's Republic of China, Mongolia, North Korea, and North Vietnam.
[2] Canada, the United States, all countries of Europe except those listed in footnotes 1 and 8, the Republic of South Africa, Israel, Japan, Australia, and New Zealand.
[3] Belgium, Denmark, France, West Germany, Ireland, Italy, Luxembourg, the Netherlands, and the United Kingdom.
[4] Austria, Norway, Portugal, Sweden, and Switzerland.
[5] Countries not indicated in footnotes 1, 2, and 8.
[6] Corresponds to the United Nations classification "Caribbean, Central, and South America."
[7] Corresponds to the United Nations classification "Asia, excluding Israel and Japan."
[8] Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Romania, and the U.S.S.R.
[9] Reported as zero in source, but both Australia and New Zealand produce natural gas; insufficient data available to calculate index number.

Source: United Nations. Monthly Bulletin of Statistics. August 1974, pp. xii-xxv.

Table 2.—World production [1] of major mineral commodities

Commodity		1971	1972	1973 p
METALS				
Aluminum:				
Bauxite	thousand metric tons	r 62,162	65,114	70,694
Alumina	do	r 22,784	23,616	26,538
Unalloyed ingot metal	do	r 10,324	11,004	12,117
Antimony	do	64	67	70
Arsenic, white [2]	do	50	42	47
Beryl [2]	metric tons	r 5,361	3,918	3,589
Bismuth [2]	do	r 3,776	4,008	3,923
Cadmium	do	r 15,425	16,687	17,013
Chromite	thousand metric tons	r 6,475	6,430	6,701
Cobalt:				
Mine [2]	metric tons	r 24,733	23,507	25,638
Refined	do	r 22,400	20,302	22,849
Columbium-tantalum concentrates [3]	do	r 10,794	15,562	24,039
Copper:				
Mine	thousand metric tons	r 6,072	6,651	7,136
Smelter	do	r 6,020	6,598	7,013
Gold	thousand troy ounces	r 46,495	44,718	43,070
Iron and steel:				
Iron ore	thousand metric tons	r 786,591	778,489	864,463
Pig iron [4]	do	r 429,766	456,145	504,412
Ferroalloys [4]	do	r 9,726	9,944	10,589
Crude steel	do	r 581,197	628,560	694,318
Lead:				
Mine	do	r 3,417	3,466	3,532
Smelter	do	r 3,341	3,470	3,534
Magnesium	do	r 233	233	237
Manganese ore	do	r 21,089	20,907	22,153
Mercury	thousand 76-pound flasks	r 301	278	276
Molybdenum	metric tons	r 77,614	79,109	82,191
Nickel	thousand metric tons	r 639	617	676
Platinum-group metals	thousand troy ounces	4,084	4,269	4,314
Selenium [5]	metric tons	1,136	1,219	1,115
Silver	thousand troy ounces	r 295,785	2 95,450	307,314
Tellurium [3]	metric tons	r 145	174	191
Tin:				
Mine [2]	thousand long tons	r 231	240	233
Smelter	do	232	236	229
Titanium concentrates:				
Ilmenite [3]	thousand metric tons	r 3,362	3,288	3,567
Rutile [2 3]	do	r 392	319	334
Tungsten, mine output, metal content	metric tons	r 35,791	38,436	38,365
Uranium oxide (U_3O_8) [3]	do	r 21,740	23,226	23,154
Vanadium [3]	do	r 16,934	18,545	19,223
Zinc:				
Mine	thousand metric tons	r 5,369	5,495	5,703
Smelter	do	r 4,731	5,119	5,231
NONMETALS				
Asbestos	do	r 3,584	3,774	4,171
Barite	do	r 3,725	3,902	4,316
Cement, hydraulic	do	r 608,780	649,461	694,396
Diamond:				
Gem	thousand carats	r 12,454	12,628	12,560
Industrial	do	r 28,913	31,182	31,167
Diatomite	thousand metric tons	r 1,524	1,544	1,588
Feldspar	do	r 2,553	2,541	2,594
Fluorspar	do	r 4,561	4,537	4,495
Graphite [2]	do	390	356	370
Gypsum	do	r 54,622	59,180	60,575
Magnesite [2]	do	r 9,183	9,126	9,234
Mica [3]	do	r 174	202	222
Nitrogen fertilizers, contained nitrogen [6]	do	r 32,919	35,053	38,812
Phosphate rock	do	r 85,456	91,389	99,995
Potash (marketable), K_2O equivalent	do	r 19,968	20,408	21,564
Pumice [3]	do	r 14,872	15,324	14,332
Pyrites, including cupreous, gross weight	do	r 25,248	23,218	22,110
Salt	do	r 144,409	147,336	150,749
Strontium minerals [3]	metric tons	r 111,343	100,098	93,559
Sulfur, elemental:				
Frasch and from ores	thousand metric tons	13,559	13,987	15,897
Byproduct	do	11,999	15,055	16,670
Talc, soapstone, pyrophyllite	do	r 4,646	4,790	5,232
Vermiculite [3]	do	416	465	500

See footnotes at end of table.

Table 2.—World production [1] of major mineral commodities—Continued

Commodity		1971	1972	1973 [p]
MINERAL FUELS AND RELATED MATERIALS				
Coal: [7]				
Anthracite	million metric tons	[r] 181	175	174
Bituminous	do	[r] 2,088	2,125	2,166
Lignite	do	800	804	819
Total	do	[r] 3,069	3,104	3,159
Coke:				
Metallurgical	thousand metric tons	[r] 341,628	343,547	366,850
Other types	do	[r] 21,186	18,384	17,841
Fuel briquets	do	[r] 116,874	94,713	86,761
Gas, natural, marketed	billion cubic feet	[r] 40,270	42,587	44,862
Peat	thousand metric tons	[r] 90,588	105,374	95,475
Petroleum, crude	million barrels	[r] 17,746	18,720	20,361

[p] Preliminary. [r] Revised.

[1] Incorporates numerous revisions from world production tables and country production tables appearing in Volume I and III, respectively, of the Minerals Yearbook as well as in the corresponding table in previous editions of this chapter.

[2] U.S. production withheld to avoid disclosing individual company confidential data.

[3] Excludes production from Communist countries: Albania, Bulgaria, the People's Republic of China, Cuba, Czechoslovakia, East Germany, Hungary, Mongolia, North Korea, North Vietnam, Poland, Romania, the U.S.S.R., and Yugoslavia, except in the case of vanadium, which includes a figure for the U.S.S.R. alone.

[4] Data presented for pig iron includes relatively small quantities of ferroalloys (not duplicating quantities reported under ferroalloys) produced in a few countries that do not report ferroalloy production separately from pig iron production.

[5] Excludes production from countries listed in footnote 3 except for Yugoslavia.

[6] Years ending June 30 of that stated.

[7] Production of coal by some countries is not reported divided into the three categories listed; such output has been distributed to the three listed grades according to best available information from supplementary sources relating to the quality of such coals.

Table 3.—Approximate percentage distribution of world mineral commodity production by major areas in 1973 [1]

Commodity	Western Hemisphere			Eastern Hemisphere							World	
				Europe			Near East and Asia					
	North and Central America	South America	Total	Non-Communist	Communist	Africa	Non-Communist	Communist	Oceania	Total	Non-Communist	Communist
METALS												
Aluminum:												
Bauxite	24.5	16.9	41.4	11.3	10.3	5.7	5.2	0.9	25.2	58.6	88.6	11.2
Alumina	38.7	8.9	47.6	11.8	13.1	2.3	8.9	1.1	15.2	52.4	85.8	14.2
Aluminum ingot	41.6	1.5	43.1	23.8	15.2	2.1	12.0	1.2	2.6	56.9	83.6	16.4
Antimony, mine output	6.8	22.2	29.0	6.0	11.1	24.3	10.2	17.2	2.2	71.0	71.7	28.3
Arsenic, white [2]	[2] 9.2	2.4	11.6	54.9	15.3	17.2	1.0	NA	--	88.4	84.7	15.3
Beryllium, beryl concentrate [2]	([3])	41.2	41.2	.1	40.4	16.3	--	NA	2.0	58.8	59.6	40.4
Bismuth, mine output [2]	[2] 16.0	35.6	51.6	3.8	3.4	.1	24.5	6.4	10.2	48.4	90.2	9.8
Cadmium, smelter output	28.0	1.2	29.2	26.0	18.5	2.3	18.8	1.2	4.0	70.8	80.3	19.7
Chromium, chromite	.3	1.9	2.2	11.7	38.4	27.4	20.3	NA	--	97.8	61.3	38.7
Cobalt:												
Mine	13.2	--	13.2	5.1	6.6	72.0	--	NA	3.1	86.8	87.2	12.8
Smelter	4.6	--	4.6	13.7	7.4	74.3	--	NA	--	95.4	92.6	7.4
Columbium-tantalum concentrate [3]	11.2	81.3	92.5	--	NA	6.2	.5	NA	.8	7.5	100.0	NA
Copper:												
Mine	34.4	13.6	48.0	4.3	13.5	20.9	6.1	1.6	5.6	52.0	84.8	15.2
Smelter	30.7	10.4	41.1	9.0	13.6	19.1	13.3	1.6	2.3	58.9	84.8	15.2
Gold	7.7	1.4	9.1	.7	16.7	67.1	2.2	.5	3.7	90.9	82.8	17.2
Iron and steel:												
Iron ore	16.7	11.4	28.1	14.8	26.3	7.1	5.0	8.6	10.1	71.9	65.1	34.9
Pig iron and ferroalloys	20.7	1.6	22.3	24.6	24.0	1.0	19.7	6.9	1.5	77.7	69.1	30.9
Crude steel	22.3	1.8	24.1	25.6	25.7	.8	18.7	4.0	1.1	75.9	70.3	29.7
Lead:												
Mine	32.1	8.0	40.1	12.6	19.8	6.1	4.4	5.5	11.5	59.9	74.7	25.3
Smelter	27.7	4.5	32.2	20.6	20.4	3.2	7.0	5.1	11.5	67.8	74.5	25.5
Magnesium, smelter	49.0	--	49.0	21.9	24.0	--	4.7	.4	--	51.0	75.6	24.4
Manganese ore, gross weight	1.6	10.0	11.6	.2	37.1	31.2	8.4	4.5	7.0	88.4	58.4	41.6
Mercury, mine output	15.4	1.5	16.9	42.0	21.3	5.1	5.3	9.4	([4])	83.1	69.3	30.7
Molybdenum, mine output	79.0	8.1	87.1	.2	10.5	--	.3	1.8	.1	12.9	87.7	12.3
Nickel, mine output	48.2	.5	48.7	2.9	20.2	4.6	3.1	NA	20.5	51.3	75.1	24.9
Platinum-group metals, mine output	7.2	.6	7.8	([4])	56.8	34.9	.5	NA	([4])	92.2	43.2	56.8
Selenium, smelter output [3]	53.3	.7	54.0	13.6	NA	NA	32.1	NA	.3	46.0	100.0	NA
Silver, mine output	41.7	18.1	59.8	6.8	16.5	4.2	4.2	.5	8.0	40.2	83.0	17.0
Tellurium, smelter output [3]	68.0	9.4	77.4	NA	NA	NA	22.6	NA	NA	22.6	100.0	NA
Tin:												
Mine [2]	[2] .2	14.5	14.7	2.1	13.0	7.2	49.9	8.6	4.5	85.3	78.4	21.6
Smelter	2.0	5.0	7.0	11.6	13.2	3.8	52.7	8.7	3.0	93.0	78.1	21.9
Titanium concentrate:												
Ilmenite [3]	44.4	.1	44.5	25.7	NA	--	9.3	NA	20.5	55.5	100.0	NA
Rutile [3]	--	([4])	([4])	--	NA	--	1.7	NA	98.3	100.0	100.0	NA

See footnotes at end of table.

Table 3.—Approximate percentage distribution of world mineral commodity production by major areas in 1973 [1]—Continued

Commodity	Western Hemisphere			Eastern Hemisphere							World	
				Europe			Near East and Asia					
	North and Central America	South America	Total	Non-Communist	Communist	Africa	Non-Communist	Communist	Oceania	Total	Non-Communist	Communist
METALS—Continued												
Tungsten, mine output	14.9	10.1	25.0	6.4	19.3	3.3	16.5	26.2	3.3	75.0	54.5	45.5
Uranium oxide (U_3O_8)	70.1	.2	70.3	9.5	NA	20.2	NA	NA	NA	29.7	100.0	NA
Vanadium	20.7	5.0	25.7	10.7	17.5	46.1	--	NA	--	74.3	82.5	17.5
Zinc:												
Mine	34.6	9.3	43.9	13.5	17.9	4.6	7.4	4.3	8.4	56.1	77.8	22.2
Smelter	20.9	2.4	23.3	26.7	20.0	3.4	16.5	4.4	5.7	76.7	75.6	24.4
NONMETALS												
Asbestos	46.2	1.0	47.2	4.1	30.8	10.6	1.5	5.0	.8	52.8	64.2	35.8
Barite	31.1	7.2	38.3	26.5	12.2	3.8	12.2	6.6	.4	61.7	81.2	18.8
Cement, hydraulic	14.8	4.4	19.2	29.8	23.2	3.0	20.7	3.1	1.0	80.8	73.5	26.5
Diamond:												
Gem	--	3.4	3.4	--	15.1	81.3	.2	NA	--	96.6	84.9	15.1
Industrial	--	2.3	2.3	--	24.4	73.3	(4)	NA	--	97.7	75.6	24.4
Diatomite	37.9	.9	38.8	35.6	24.6	.4	.2	NA	.4	61.2	75.4	24.6
Feldspar	31.4	3.8	35.2	45.9	11.6	1.6	5.6	NA	.1	64.8	88.4	11.6
Fluorspar	32.3	2.8	35.1	27.7	13.9	6.3	8.5	8.5	(4)	64.9	77.6	22.4
Graphite [2]	[2] 17.7	1.1	18.8	11.4	23.2	4.1	14.1	28.4	--	81.2	48.4	51.6
Gypsum	36.3	1.8	38.1	37.1	11.1	2.3	8.7	1.0	1.7	61.9	87.9	12.1
Magnesite [3]	[2] .3	3.3	3.6	34.4	23.3	2.2	6.0	30.3	.2	96.4	46.4	53.6
Mica [3]	72.7	1.8	74.5	5.1	NA	3.2	17.2	NA	--	25.5	100.0	NA
Nitrogen fertilizers, contained nitrogen	25.5	.9	26.4	23.8	27.8	1.4	14.1	6.0	.5	73.6	66.2	33.8
Phosphate rock	38.4	.3	38.7	.1	23.0	28.8	1.7	3.2	4.5	61.3	73.8	26.2
Potash, K_2O equivalent (marketable)	29.5	.1	29.6	26.0	39.3	1.2	2.5	1.4	--	70.4	59.3	40.7
Pumice [3]	27.3	1.2	28.5	71.0	NA	.1	--	NA	.4	71.5	100.0	NA
Pyrite	3.2	--	3.2	31.6	39.5	4.8	8.7	11.3	.9	96.8	49.2	50.8
Salt	33.8	3.3	37.1	23.9	14.1	1.4	8.3	12.4	2.8	62.9	73.5	26.5
Strontium minerals [3]	82.6	1.2	83.8	14.0	NA	1.9	.3	NA	--	16.2	100.0	NA
Sulfur:												
Native (including Frasch)	58.3	1.0	59.3	.5	36.8	--	2.6	.8	--	40.7	62.4	37.6
Byproduct, elemental	59.9	(4)	59.9	15.1	11.9	.3	10.1	.7	2.0	40.1	87.4	12.6
Talc	23.6	2.1	25.7	15.7	9.1	.3	42.6	5.5	1.1	74.3	85.4	14.6
Vermiculite [3]	66.3	1.7	68.0	--	NA	31.5	.5	NA	--	32.0	100.0	NA
MINERAL FUELS AND RELATED MATERIALS												
Coal:												
Anthracite and bituminous	23.6	.3	23.9	11.8	33.3	2.8	5.4	20.1	2.7	76.1	46.6	53.4
Lignite	2.0	--	2.0	21.3	72.4	--	1.0	.3	3.0	98.0	27.3	72.7

See footnotes at end of table.

Table 3.—Approximate percentage distribution of world mineral commodity production by major areas in 1973 [1]—Continued

MINERAL FUELS AND RELATED MATERIALS—Continued												
Coke:												
Metallurgical	18.4	.9	19.3	23.7	31.1	1.2	15.7	7.7	1.3	80.7	61.2	38.8
Other types	--	.3	.3	11.1	40.9	.8	46.4	--	.5	99.7	59.1	40.9
Fuel briquets	--	--	--	12.6	72.3	(4)	13.8	NA	1.3	100.0	27.7	72.3
Gas, natural, marketed	58.8	2.2	61.0	11.5	22.4	.8	3.8	.2	.3	39.0	77.4	22.6
Peat	1.0	(4)	1.0	7.7	91.2	--	.1	NA	--	99.0	8.8	91.2
Petroleum, crude	20.8	8.1	28.9	.6	15.9	10.8	41.3	1.8	.7	71.1	82.3	17.7

NA Production data not available and no basis available for reliable estimate of output level.
[1] Percentages in this table have been calculated from the most reliable data available through May 15, 1975. For details on countries included in the various continental groupings, see text.
[2] U.S. data withheld to avoid disclosing individual company confidential data and not included in total upon which percentages have been calculated.
[3] Percentages calculated from a total including no estimates for production by Communist countries (except Yugoslavia).
[4] Production negligible less than 0.05% of world output.

Table 4.—Value of world export trade in major mineral commodity group [1]

(Million U.S. dollars)

Commodity group [1]	1968	1969	1970	1971	1972 p
Metals:					
All ores, concentrates, scrap	5,590	6,340	8,010	r 7,200	7,670
Iron and steel	11,420	13,700	r 17,070	r 17,770	20,040
Nonferrous metals	9,440	10,870	r 12,210	r 10,350	11,550
Subtotal	26,450	30,910	r 37,290	r 35,320	39,260
Nonmetals (crude only)	2,170	2,260	2,390	r 2,570	2,920
Mineral fuels	23,020	24,860	r 28,670	r 35,490	41,220
Total	51,640	58,030	r 68,350	r 73,380	83,400
All commodities	r 238,220	r 272,000	r 317,070	r 347,290	412,360

p Preliminary. r Revised.

[1] Data presented are for selected major commodity groups of the Standard International Trade Classification—Revised (SITC–R) and as such exclude some mineral commodities classified in that data array together with other (nonmineral) commodities. SITC–R categories included are as follows: Ores, concentrates, and scrap—SITC Division 28; iron and steel—SITC Division 67; nonferrous metals—SITC Division 68; nonmetals (crude only)—SITC Division 27; mineral fuels—SITC Division 3. Major items not included are the metals, metalloids, and metal oxides of SITC Group 513; mineral tar and crude chemicals from coal, petroleum, and natural gas of SITC Division 52; manufactured fertilizers of SITC Division 56; and nonmetallic mineral manufactures of SITC Groups 661, 662, 663, and 667.

Table 5.—Distribution of total value of export trade in major mineral commodity group, by group [1]

(Percent)

Commodity group [1]	1968	1969	1970	1971	1972
Metals:					
All ores, concentrates, scrap	10.8	10.9	11.7	9.8	9.2
Iron and steel	22.1	23.6	25.0	24.2	24.0
Nonferrous metals	18.3	18.8	17.9	14.1	13.9
Total	51.2	53.3	54.6	48.1	47.1
Nonmetals (crude only)	4.2	3.9	3.5	3.5	3.5
Mineral fuels	44.6	42.8	41.9	48.4	49.4
Grand total	100.0	100.0	100.0	100.0	100.0

[1] For detailed definition of groups, see footnote 1, table 4.

Table 6.—Growth of value of export trade in major mineral commodity group, by group [1]

(Percent increase over previous year)

Commodity group [1]	1968	1969	1970	1971	1972
Metals:					
All ores, concentrates, scrap	11.1	13.4	26.3	–10.2	6.5
Iron and steel	10.4	20.0	24.6	4.1	12.8
Nonferrous metals	17.9	15.1	12.3	–15.2	11.6
All metals	13.1	16.9	20.6	–5.3	11.2
Nonmetals (crude only)	8.5	4.1	5.8	7.5	13.6
Mineral fuels	10.3	8.0	15.3	23.8	16.1
All major mineral commodity groups	11.7	12.4	17.8	7.4	13.7
All commodity groups	11.4	14.2	16.6	9.5	18.7

[1] For detailed definition of groups, see footnote 1, table 4.

Table 7.—Significance of trade in major mineral commodity group [1] to total trade of various world areas 1972

Area and country [2]	Value, million U.S. dollars				Major mineral share of total commodities (percent)	
	Major mineral commodity groups		All commodities			
	Exports from	Exports to	Exports from	Exports to	Exports from	Exports to
Northern North America:						
Canada	5,235	2,107	20,180	17,630	25.9	12.0
United States	3,895	11,615	48,980	54,340	8.0	21.4
Total	9,130	13,722	69,160	71,970	13.2	19.1
Latin America	[3] 7,155	4,265	19,760	23,010	[4] 36.2	18.5
Europe:						
Market economy countries:						
EEC	17,680	26,150	124,000	115,390	14.3	22.7
EFTA	6,095	11,730	55,540	61,440	11.0	19.1
Other	1,035	3,070	8,740	15,210	11.8	20.2
Subtotal	24,810	40,950	188,280	192,040	13.2	21.3
Centrally planned economy countries	8,915	7,055	39,240	37,990	22.7	18.6
Total	33,725	48,005	227,520	230,030	14.8	20.9
Africa:						
Republic of South Africa	[5] 240	285	2,600	3,440	[4] 9.2	8.3
Other	[6] 8,290	1,708	14,660	14,920	[4] 56.6	11.5
Total	8,530	1,993	17,260	18,360	49.4	10.9
Near East	[7] 14,550	1,611	16,980	10,600	[4] 85.7	15.2
Far East and South Asia:						
Market economy countries:						
Japan	[8] 3,949	7,440	28,590	19,560	[4] 13.8	38.0
Other	[3] 2,960	3,661	20,050	23,550	[4] 14.8	15.6
Subtotal	6,909	11,101	48,640	43,110	14.2	25.8
Centrally planned economy countries	298	756	3,150	3,450	9.5	21.9
Total	7,207	11,857	51,790	46,560	13.9	25.5
Australia and New Zealand [9]	1,801	584	8,102	5,500	22.2	10.6
Not reported	1,302	1,363	1,788	6,330	72.8	21.5
Grand total	83,400	83,400	412,360	412,360	20.2	20.2

[1] For detailed definition of groups, see footnote 1, table 4.

[2] Regional groupings generally conform to United Nations practice; modifications and special aspects of classification scheme are as follows: (1) Latin America includes Mexico, Central America, and South America, but excludes Caribbean Islands; (2) EEC consists of Belgium, France, West Germany, Italy, Luxembourg, and the Netherlands; (3) EFTA consists of Austria, Denmark, Norway, Portugal, Sweden, Switzerland, and the United Kingdom; (4) Other market economy Europe consists of Finland, Greece, Iceland, Ireland, and Spain, as well as Yugoslavia (a centrally planned economy country); (5) Centrally planned Europe includes Albania, Bulgaria, Czechoslovakia, Hungary, Poland, Romania, and the U.S.S.R.; (6) Other Africa corresponds to the United Nations category "Developing Africa"; (7) Near East corresponds to the United Nations category "Developing Asia, Middle East"; (8) Other market economy South Asia and Far East refers to the United Nations category "Developing Asia, Other"; (9) Centrally planned Far East and South Asia consists of the People's Republic of China, North Korea, Mongolia, and North Vietnam; (10) The category "Not reported" is derived by subtracting all listed figures from reported totals, and includes the Caribbean and Pacific Islands.

[3] Partial figure; value of crude nonmetals excluded but presumably included under "Not reported."

[4] Percentage based on partial figure; see footnote to entry in "Exports from" value column.

[5] Partial figure; includes value of mineral fuels and crude nonmetals only; totals for other commodity groups presumably included under "Not reported."

[6] Partial figure; value of iron and steel excluded, but presumably included under "Not reported."

[7] Partial figure; includes value of mineral fuels only; totals for other commodity groups presumably included under "Not reported."

[8] Partial figure; value of metal ores, concentrates, and scrap as well as crude nonmetals excluded but presumably included under "Not reported."

[9] Not reported in source. Derived from United Nations World Trade Annual, vs. I, II, and III, 1974.

Source: Unless otherwise specified, data from United Nations Monthly Bulletin of Statistics. V. XXVIII, Nos. 4 and 9, New York, 1974, pp. xxi-xxxii and pp. xxiii-xxxiii.

Table 8.—Export origins and destinations for major mineral commodity group [1] shipments, by value, in 1972

(Million U.S. dollars)

Area and country [2]	Exports from					Exports to				
	Metal ores, concentrates, scrap	Iron and steel	Non-ferrous metals	Non-metals	Mineral fuels	Metal ores, concentrates, scrap	Iron and steel	Non-ferrous metals	Non-metals	Mineral fuels
Northern North America:										
Canada	1,400	410	1,360	335	1,730	110	580	235	92	1,090
United States	510	830	660	345	1,550	1,090	2,940	1,930	285	5,370
Total [3]	1,910	1,240	2,020	680	3,280	1,200	3,520	2,165	377	6,460
Latin America	1,480	195	830	(4)	4,650	110	1,060	330	105	2,660
Europe:										
Market economy countries:										
EEC	690	8,780	2,500	550	5,160	2,120	5,860	4,100	930	13,140
EFTA	540	2,410	1,910	245	990	980	2,420	2,040	410	5,880
Other	110	330	340	75	180	310	780	320	120	1,540
Subtotal	1,340	11,520	4,750	870	6,330	3,410	9,060	6,460	1,460	20,560
Centrally planned economy countries	740	2,550	1,160	475	3,990	830	2,680	850	365	2,330
Total [3]	2,080	14,070	5,910	1,345	10,320	4,240	11,740	7,310	1,825	22,890
Africa:										
Republic of South Africa	(1)	(4)	(4)	140	100	4	63	20	8	190
Other	500	(4)	1,280	280	6,230	12	720	130	56	790
Total [3]	500	(1)	1,280	420	6,330	16	783	150	64	980
Near East	(1)	(4)	(4)	(1)	14,550	16	650	115	110	720
Far East and South Asia:										
Market economy countries:										
Japan	(1)	3,610	265	(1)	74	1,790	95	740	195	4,620
Other	560	330	480	(1)	1,590	130	1,370	405	96	1,660
Subtotal [3]	560	3,940	745	(1)	1,664	1,920	1,465	1,145	291	6,280
Centrally planned economy countries	50	99	77	55	17	20	485	120	16	115
Total [3]	610	4,039	822	55	1,681	1,940	1,950	1,265	307	6,395
Australia and New Zealand [5]	759	192	429	17	5	11	180	59	39	295
Not reported [5]	331	304	259	403	409	137	157	156	93	820
Grand total	7,670	20,040	11,550	2,920	41,225	7,670	20,040	11,550	2,920	41,220

[1] For detailed definitions of groups, see footnote 1, table 4.
[2] For detailed definitions of areas listed below, see footnote 2, table 7.
[3] Not reported in source but derived from data therein.
[4] Not reported separately for this area; presumably included under "Not reported."
[5] Not reported in source. Derived from United Nations World Trade Annual, v. II, and III, 1974.

Source: Unless otherwise specified, data from United Nations Monthly Bulletin of Statistics. V. XXVIII, Nos. 4 and 9, New York, 1974, pp. xxi-xxxii and pp. xxiii-xxxiii.

Table 9.—Direction of trade in major mineral commodities [1] in 1972
(Million U.S. dollars)

Source [2]	Destination [2]									
	Northern North America			Latin America	Market economy Europe				Centrally planned economy Europe	Near East
	United States	Canada	Total [3]		EEC	EFTA	Other [3]	Total		
Northern North America:										
Canada	3,380	XX	3,380	96	380	707	37	1,124	12	13
United States	XX	975	975	541	813	291	116	1,220	11	71
Total [3]	3,380	975	4,355	637	1,193	998	153	2,344	23	84
Latin America [4]	3,010	488	3,498	1,521	784	563	103	1,450	133	10
Europe:										
Market economy countries:										
EEC	1,306	106	1,412	297	9,725	3,075	670	13,470	750	256
EFTA	532	108	640	162	1,970	2,011	409	4,390	281	90
Other [3]	128	7	135	31	400	194	36	630	184	22
Subtotal	1,966	221	2,187	490	12,095	5,280	1,115	18,490	1,215	368
Centrally planned economy countries	89	14	103	205	1,241	1,043	396	2,680	5,025	117
Total [3]	2,055	235	2,290	695	13,336	6,323	1,511	21,170	6,240	485
Africa:										
Republic of South Africa [5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other	857	99	956	511	4,270	1,275	420	5,965	194	11
Total [3]	857	99	956	511	4,270	1,275	420	5,965	194	11
Near East [7]	425	155	580	435	5,560	2,010	710	8,280	72	630
Far East and South Asia:										
Market economy countries:										
Japan [8]	1,133	113	1,246	346	228	153	93	474	133	214
Other [4]	428	19	447	51	187	57	28	272	70	47
Subtotal [3]	1,561	132	1,693	397	415	210	121	746	203	261
Centrally planned economy countries	2	3	5	6	40	4	--	44	73	2
Total [3]	1,563	135	1,698	403	455	214	121	790	276	263
Australia and New Zealand [9]	87	5	92	7	189	172	15	376	2	15
Not reported [3]	238	15	253	56	363	175	37	575	115	113
Grand total [10]	11,615	2,107	13,722	4,265	26,150	11,730	3,070	40,950	7,055	1,611

See footnotes at end of table.

Table 9.—Direction of trade in major mineral commodities [1] in 1972—Continued

(Million U.S. dollars)

Source [2]	Destination [2]									
	Africa			Market economy Far East and South Asia			Centrally planned economy Far East and South Asia	Australia and New Zealand	Not reported [3]	Grand total [10]
	Republic of South Africa	Other	Total [3]	Japan	Other	Total [3]				
Northern North America:										
Canada	4	4	8	369	60	429	23	33	117	5,235
United States	16	46	62	742	224	966	--	38	11	3,895
Total [3]	20	50	70	1,111	284	1,395	23	71	128	9,130
Latin America [4]	--	30	30	387	15	402	5	3	103	7,155
Europe:										
Market economy countries:										
EEC	36	549	585	46	143	189	134	15	572	17,680
EFTA	30	110	140	72	155	227	68	53	44	6,095
Other [3]	2	35	37	6	4	10	5	--	(11)	1,035
Subtotal	68	694	762	124	302	426	207	68	597	24,810
Centrally planned economy countries	--	177	177	175	97	272	173	1	162	8,915
Total [3]	68	871	939	299	399	698	380	69	759	33,725
Africa:										
Republic of South Africa [5]	NA	NA	NA	NA	NA	NA	NA	NA	240	240
Other [6]	5	175	180	343	49	392	31	2	48	8,290
Total [3]	5	175	180	343	49	392	31	2	288	8,530
Near East [7]	160	330	490	2,830	1,010	3,840	22	180	21	14,550
Far East and South Asia:										
Market economy countries:										
Japan [8]	23	126	149	XX	971	971	301	94	21	3,949
Other [4]	1	39	40	1,217	704	1,921	6	80	26	2,960
Subtotal [3]	24	165	189	1,217	1,675	2,892	307	174	47	6,909
Centrally planned economy countries	--	13	13	52	36	88	NA	--	67	298
Total [3]	24	178	202	1,269	1,711	2,980	307	174	114	7,207
Australia and New Zealand [9]	7	8	15	845	130	975	19	71	229	1,801
Not reported [3]	1	66	67	356	63	419	(12)	14	(13)	1,302
Grand total [10]	285	1,708	1,993	7,440	3,661	11,101	756	584	1,363	83,400

NA Not available. XX Not applicable.

[1] For detailed listing of commodities included, see footnote 1, table 4. It should be noted that certain commodities excluded for specific areas as indicated by footnotes are presumably included in grand totals.

[2] For detailed definitions of areas listed, see footnote 2, table 7.

[3] Not reported in source. Data represent difference between reported total and reported detail. In selected cases, reported detail exceeds the reported total by the amount indicated in the referenced footnote.

[4] Excludes crude nonmetals.

[5] Includes crude nonmetals and mineral fuels only.

[6] Excludes iron and steel.

[7] Includes mineral fuels only.

[8] Excludes crude nonmetals and metal ores and scrap.

[9] Not reported in source. Derived from United Nations World Trade Annual, vs. I, II, and III, 1974.

[10] As reported in source. Detail may not add to listed total.

[11] Summation of detail exceeds reported total by 19 million. Reason for discrepancy is unaccounted for.

[12] Summation of detail exceeds reported total by 31 million. Reason for discrepancy is unaccounted for.

[13] Summation of detail exceeds total by 279 million. Reason for discrepancy is unaccounted for.

Source: Unless otherwise specified, data from United Nations Monthly Bulletin of Statistics. V. XXVIII, Nos. 4 and 9, New York, 1974, pp. xxi-xxxii and pp. xxiii-xxxiii.

Table 10.—Iron ore consumption,[1] by selected major country
(Million metric tons)

Country	1971	1972	1973 p
European Economic Community:			
Belgium	r 17.1	20.2	20.2
France [2]	42.4	44.9	46.4
Germany, West	42.3	44.1	51.0
Italy	10.2	r 11.7	11.5
Luxembourg	14.2	14.4	14.7
Netherlands	5.6	6.3	6.8
United Kingdom [3]	27.5	e 26.1	28.5
Total	r 159.3	r 167.7	179.1
European Free Trade Association:			
Austria	5.5	5.6	6.1
Norway	1.1	1.1	NA
Portugal	e.4	e.5	NA
Sweden	r 9.8	r 9.9	e 4.6
Total	r 16.8	r 17.1	10.7
Other European market economies:			
Finland	1.4	1.6	NA
Spain	e 3.2	r 9.9	NA
Total	4.6	r 11.5	NA
Centrally planned economy countries of Europe:			
Czechoslavakia e	3.4	r 14.4	13.9
Hungary	3.5	3.6	3.9
Poland [4]	e 11.5	r 11.4	10.5
Romania e	8.5	1.4	9.5
U.S.S.R.e	159.6	r 164.5	171.0
Yugoslavia	r 3.1	r 4.1	e 3.5
Total	r 189.6	r 199.4	212.3
Other:			
Canada e	12.1	[5] 13.1	[5] 15.1
Japan	96.4	98.6	120.3
Turkey	2.0	2.2	NA
United States [6]	110.7	r 121.8	[7] e 142.8
Total	221.2	r 235.7	278.2
Grand total	r 591.5	r 631.4	680.3

e Estimate. p Preliminary. r Revised. NA Not available.

[1] Yearly data based on a total of three categories: Iron ore for steelworks, for production of agglomerates, and iron ore and concentrate for blast furnaces. An estimated figure is based on a partial total of these three categories and is not a projected consumption level based on other information.

[2] Includes sinter produced at mines.

[3] Includes calcined ores.

[4] Includes 422,000 metric tons of contained metal for steelworks in 1972 and 211,000 metric tons of contained metal in 1973.

[5] Source: Department of Energy, Mines and Resources, Ottawa, Canada, Iron and Steel (Preprint to Canadian Mineral Yearbook, 1974), November 1974.

[6] Excludes consumption of agglomerating plants located at mine sites.

[7] U.S. Bureau of Mines estimate.

Source: Unless otherwise specified, United Nations Economic Commission for Europe. Annual Bulletin of Steel Statistics for Europe, 1973. V. I, No. 1, New York, 1974.

Table 11.—Iron and steel scrap consumption, by selected major country
(Thousand metric tons)

Country	1971	1972	1973 p
European Economic Community:			
Beligium [1 2]	3,467	4,360	4,514
France [2 3]	8,107	8,525	8,960
Germany, West [3]	21,176	22,713	29,984
Italy [2]	11,174	12,378	13,238
Luxembourg	1,545	1,634	1,773
Netherlands	2,227	2,242	2,040
United Kingdom [1 3]	17,879	18,691	[2] 14,484
Total	r 65,575	r 70,543	74,993
European Free Trade Association:			
Austria [2 3]	1,578	1,575	1,585
Denmark [2 4]	520	506	420

See footnotes at end of table.

Table 11.—Iron and steel scrap consumption, by selected major country—Continued

(Thousand metric tons)

Country	1971	1972	1973 p
European Free Trade Association—Continued			
Norway [1 2 3]	484	490	NA
Portugal [1 2 3]	167	e 132	NA
Sweden [1 2]	r 3,164	r 3,285	[3 5] 3,568
Total	r 5,913	r 5,988	5,573
Other market economies:			
Finland	586	717	NA
Spain [3 6]	e 5,116	5,848	NA
Total	5,702	r 6,565	NA
Centrally planned economy countries of Europe:			
Czechoslavakia [1 2 3]	4,534	5,981	4,944
Hungary [1 3]	1,937	2,052	2,077
Poland [6]	e [2] 6,618	r 7,318	7,863
Romania [1 3 5]	2,995	2,830	2,704
U.S.S.R. [1 2 3 e]	43,850	44,947	46,257
Yugloslavia [1 3]	r 1,616	1,535	1,729
Total	r 61,550	r 64,663	65,574
Other:			
Canada [1 2 3]	5,240	5,487	6,923
Japan [3]	33,406	39,668	48,672
Turkey [1 3]	[2] 311	[5] 440	NA
United States [1]	74,904	83,418	[7] 93,974
Total	r 113,861	r 129,013	149,569
Grand total	r 252,601	r 276,772	295,709

e Estimate. p Preliminary. r Revised. NA Not available.

[1] Excludes scrap consumption by rerollers.
[2] Excludes scrap consumption by iron foundries.
[3] Excludes scrap consumption by industry other than iron and steel.
[4] Production of pig iron, which consumed 225,000 metric tons of scrap in 1971 and 37,300 metric tons in 1972, was discontinued at the close of 1972.
[5] Excludes scrap consumption in blast furnaces.
[6] Excludes scrap consumption in steelworks.
[7] Source: U.S. Bureau of Mines, 1974.

Source: United Nations Economic Commission for Europe. Annual Bulletin of Steel Statistics for Europe, 1973. V. I, No. 1, New York, 1974.

Table 12.—Estimated world [1] consumption of major nonferrous metals

Commodity		1971 r	1972 r	1973 p
Aluminum [2]	thousand metric tons	10,944	11,999	12,803
Copper [3]	do	7,309	7,888	8,530
Lead [4]	do	3,588	3,726	4,109
Zinc [5]	do	4,704	5,166	5,536
Tin [6]	thousand long tons	186	189	205

p Preliminary. r Revised.
[1] In general, figures are totals for major consuming countries only; sum of consumption by excluding minor consumers may be significant; data included for Communist countries (except Yugoslavia) are listed as conjectural in source.
[2] Apparently includes secondary metal.
[3] Primary and secondary refined metal.
[4] Chiefly primary, but including some secondary.
[5] Primary and secondary slab.
[6] Primary only as reported by the International Tin Council. Communist countries (except Yugoslavia) are excluded; consumption of primary and secondary tin by these countries is estimated at about 60,000 long tons annually.

Source: Yearbook of the American Bureau of Metal Statistics. Fifty-third Annual Issue for the Year 1973. New York, 1974, 152 pp.

Table 13.—World energy consumption,[1] by energy source

(Million metric tons of standard coal equivalent unless otherwise specified)

Area [2] and year	Solid fuels	Liquid fuels	Natural and imported gas	Hydro, nuclear, imported electricity	Total energy	
					Aggregate [1]	Per capita (kilograms)
Market economy:						
North America:						
1968	481	928	790	47	2,247	10,141
1969	490	978	853	52	2,373	10,598
1970	496	1,024	897	54	2,471	10,914
1971	476	1,064	928	59	2,527	11,047
1972	501	1,151	945	65	2,662	11,531
Other America:						
1968	7	74	12	5	98	656
1969	8	82	13	6	107	701
1970	8	84	14	7	112	714
1971	8	91	16	7	122	756
1972	8	95	16	8	126	759
Caribbean America:						
1968	5	80	34	3	123	1,067
1969	6	82	36	3	127	1,073
1970	5	94	40	4	142	1,167
1971	5	99	41	4	149	1,188
1972	6	106	42	4	158	1,227
Western Europe:						
1968	456	601	58	46	1,161	3,317
1969	457	662	80	46	1,244	3,530
1970	441	753	108	48	1,350	3,814
1971	411	787	140	49	1,386	3,890
1972	376	831	177	53	1,436	4,000
Africa:						
1968	57	38	2	2	99	298
1969	57	40	2	3	102	298
1970	59	45	2	3	109	310
1971	63	53	2	3	122	338
1972	64	56	10	4	134	363
Near East:						
1968	6	40	13	1	59	599
1969	7	44	16	1	68	661
1970	7	50	27	1	85	809
1971	7	54	27	1	88	817
1972	7	59	28	1	95	857
Far East:						
1968	169	238	13	13	433	403
1969	180	276	13	15	483	439
1970	180	322	16	16	534	474
1971	172	348	17	17	554	483
1972	169	357	20	18	565	482
Oceana:						
1968	34	33	(3)	2	70	3,777
1969	35	35	(3)	3	73	3,889
1970	35	38	2	3	78	4,050
1971	36	38	3	3	80	4,094
1972	37	41	5	3	85	4,275
Total market economy:						
1968	1,216	2,032	921	119	4,289	20,258
1969	1,239	2,198	1,013	128	4,577	21,189
1970	1,231	2,409	1,107	134	4,882	22,252
1971	1,178	2,534	1,174	144	5,029	22,613
1972	1,167	2,696	1,243	155	5,261	23,494
Centrally planned economy:						
Europe: [4]						
1968	742	351	264	15	1,372	4,006
1969	762	380	285	16	1,444	4,179
1970	769	416	313	18	1,515	4,354
1971	785	446	341	18	1,591	4,532
1972	808	482	360	18	1,668	4,710
Asia: [5]						
1968	326	23	NA	5	354	460
1969	351	22	NA	5	378	484
1970	388	30	NA	5	424	532
1971	421	37	NA	6	464	573
1972	432	43	NA	6	481	584
Total centrally planned economy:						
1968	1,068	374	264	19	1,725	4,466
1969	1,114	402	285	21	1,822	4,668

See footnotes at end of table.

Table 13.—World energy consumption,[1] by energy source—Continued

(Million metric tons of standard coal equivalent unless otherwise specified)

Area [2] and year	Solid fuels	Liquid fuels	Natural and imported gas	Hydro, nuclear, imported electricity	Total energy	
					Aggregate [1]	Per capita (kilograms)
Centrally planned economy—Continued						
Total centrally planned economy—Continued						
1970	1,157	446	313	23	1,939	4,886
1971	1,206	483	341	24	2,055	5,105
1972	1,240	524	360	25	2,149	5,294
World total:						
1968	2,284	2,407	1,185	138	6,015	24,724
1969	2,352	2,601	1,298	148	6,399	25,852
1970	2,388	2,854	1,421	157	6,820	27,138
1971	2,384	3,017	1,515	167	7,084	27,718
1972	2,407	3,220	1,603	180	7,410	28,788

NA Not available.

[1] In most cases data are aggregates of country figures representing apparent inland consumption—the arithmetic result of adding production and imports and subtracting from this sum the total of exports, bunker loadings, and additions to stocks (where the latter are known). All totals in this table are reported in source and may not represent the sum of listed parts due to rounding and/or omission from detail of minor quantities not listed separately. A large number of entries in this table have been revised from those appearing in previous editions of this chapter due to revisions published in new edition of source; such revisions have not been identified by footnotes.

[2] Areas listed are those appearing in source and have not been conformed in scope to standard terms used elsewhere in the Minerals Yearbook, except that the source term "Mid East" has been converted to "Near East."

[3] Nil or less than ½ unit.

[4] Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Romania, and the U.S.S.R.

[5] People's Republic of China, North Vietnam, Mongolia, and North Korea.

Source: United Nations. World Energy Supplies 1968–71 and 1969–72. Statistical Papers, Series J, Nos. 15 and 16, New York, 1973 and 1974, pp. 3, 5.

Table 14.—Annual investment expenditure in the steel industry for selected countries

(Million dollars)

Country or country group	1971	1972 [p]
European Economic Community (EEC)	[r] 2,266	2,628
European Free Trade Association (EFTA) [1]	[r] 749	955
Other countries:		
Australia	104	216
Canada	[r] 399	402
Finland	[r] 59	29
Ireland	[r] 3	5
Japan [2]	[r] 2,430	2,310
Spain	[r] 211	229
Turkey	75	59
United States	[r] 1,425	1,164

[p] Preliminary. [r] Revised.

[1] Totals given exclude expenditures in Switzerland and any non-British Steel Corp. investment in the United Kingdom.

[2] Japanese fiscal years.

Source: Organization for Economic Cooperation and Development. The Iron and Steel Industry in 1972 and Trends in 1973, p. 80.

Table 15.—Market economy country petroleum capital expenditures and exploration expenses, by geographic area

(Million dollars)

	1971	1972	1973
United States:			
Capital expenditures	7,250	9,050	10,640
Exploration expenses	715	740	850
Total	7,965	9,790	11,490
Other Western Hemisphere:			
Capital expenditures	3,350	3,120	3,305
Exploration expenses	255	250	275
Total	3,605	3,370	3,580
Western Europe:			
Capital expenditures	4,150	4,450	4,825
Exploration expenses	75	125	175
Total	4,225	4,575	5,000
Africa:			
Capital expenditures	975	1,005	975
Exploration expenses	150	175	125
Total	1,125	1,180	1,100
Near East:			
Capital expenditures	825	975	1,390
Exploration expenses	50	50	50
Total	875	1,025	1,440
Far East:			
Capital expenditures	2,500	2,700	2,410
Exploration expenses	150	200	225
Total	2,650	2,900	2,635
Unspecified: Capital expenditures (no exploration expenses)	2,750	3,650	6,450
Total:			
Capital expenditures	21,800	24,950	29,995
Exploration expenses	1,395	1,540	1,700
Grand total	23,195	26,490	31,695

Source: Energy Division, Chase National Bank, N.A. Capital Investments of the World Petroleum Industry, 1973, pp. 8–9.

Table 16.—Market economy country petroleum industry capital expenditures, by industry sector and exploration expenses

(Million dollars)

	1971	1972	1973
Capital expenditures:			
Production:			
Crude oil and natural gas	6,520	9,590	12,415
Natural gasoline plants	695	515	510
Pipelines	1,200	1,230	1,230
Marine	2,875	3,775	6,550
Refineries	4,755	4,955	4,865
Marketing	3,380	2,825	2,480
Chemical plants	1,535	1,350	1,175
Other	840	710	770
Total	21,800	24,950	29,995
Exploration expenses	1,395	1,540	1,700
Grand total	23,195	26,490	31,695

Source: Energy Division, Chase Manhattan Bank, N.A. Capital Investments of the World Petroleum Industry, 1973, pp. 10–11.

Table 17.—U.S. direct foreign investment in mineral industries: Value, earnings, and income

(Million dollars)

Area and country	Mining, smelting, refining			Petroleum		
	Value	Earnings [1]	Income [2]	Value	Earnings [1 3]	Income [2 3]
1970	6,168	675	553	21,714	2,935	2,608
1971	6,685	499	482	24,152	3,856	3,442
1972 [r]						
Canada	3,455	133	130	5,301	451	161
Latin American and other Western Hemisphere:						
Latin American Republics:						
Chile	359	NA	NA	NA	NA	NA
Venezuela	NA	NA	NA	1,548	254	246
Other	958	81	74	1,698	20	−23
Subtotal [4]	1,317	81	74	3,246	274	223
Other Western Hemisphere	782	94	98	1,046	29	21
Total	2,099	175	172	4,292	303	244
Europe:						
European Economic Community [5]	9	NA	NA	3,363	−96	−17
United Kingdom	5	NA	NA	2,312	110	62
Other Western Europe	60	NA	NA	1,177	−44	−17
Total	74	NA	NA	6,852	−30	28
Africa:						
South Africa, Republic of	137	26	18	215	NA	NA
Other	432	26	9	2,254	454	381
Total	569	52	27	2,469	454	381
Near East	5	NA	NA	1,767	1,358	1,402
Far East and Pacific:						
Japan	--	--	--	901	51	9
Australia	703	63	61	NA	NA	NA
New Zealand	8	(6)	--	NA	NA	NA
Other	197	−2	1	1,461	294	239
Total	908	61	62	2,362	345	248
International shipping	--	--	--	2,336	343	306
Grand total [7]	7,110	419	395	26,263	3,311	2,826
1973: [p]						
Canada	3,735	230	149	5,864	670	219
Latin American and other Western Hemisphere:						
Latin American Republics:						
Chile	359	NA	NA	NA	NA	NA
Venezuela	NA	NA	NA	1,341	487	488
Other	983	156	146	1,726	148	48
Subtotal [4]	1,342	156	146	3,067	635	536
Other Western Hemisphere	765	95	98	1,326	223	107
Total	2,107	251	244	4,393	858	643
Europe:						
European Economic Community:						
Denmark and Ireland	1	--	--	340	6	−21
United Kingdom	6	NA	NA	2,631	122	76
Other [5]	11	NA	NA	4,394	416	153
Subtotal	18	NA	NA	7,365	544	208
Other Western Europe	69	NA	NA	1,022	48	(6)
Total	87	NA	NA	8,387	592	208
Africa:						
South Africa, Republic of	158	36	26	274	NA	NA
Other	397	33	19	2,002	548	406
Total	555	69	45	2,276	548	406
Near East	5	NA	NA	2,377	2,242	2,146

See footnotes at end of table.

Table 17.—U.S. direct foreign investment in mineral industries: Value, earnings, and income—Continued

(Million dollars)

Area and country	Mining, smelting, refining			Petroleum		
	Value	Earnings [1]	Income [2]	Value	Earnings [1 3]	Income [2 3]
1973: [p]—Continued						
Far East and Pacific:						
Japan	--	--	--	922	100	13
Australia	785	100	88	NA	NA	NA
New Zealand	8	NA	--	NA	NA	NA
Other	199	21	24	1,659	599	470
Total	992	121	107	2,581	699	483
International shipping	--	--	--	2,740	394	122
Grand total [7]	7,483	675	548	29,567	6,183	4,325

[p] Preliminary. [r] Revised. NA Not available.
[1] Sum of U.S. share in net earnings of subsidiary and branch profits.
[2] Sum of interest, dividends, and branch earnings.
[3] Data for petroleum earnings for the years listed have been revised downward due to overstatement of income that was originally computed on the basis of "posted" prices by source publication.
[4] Partial figure; excludes quantity for detail indicated as not available.
[5] Includes Belgium, France, Germany, Italy, Luxembourg, and the Netherlands.
[6] Less than ½ unit.
[7] Detail may not add to totals shown because of independent rounding and exclusion of some data in detail.

Source: U.S. Department of Commerce, Survey of Current Business. V. 54, No. 8, part II, August 1974, pp. 10–24.

Table 18.—World merchant fleet distribution, by type [1]

	1969	1970	1971	1972	1973
Number of vessels:					
Tankers	4,071	4,232	4,431	4,581	4,813
Bulk carriers	2,748	2,954	3,218	3,539	3,800
Freighters	10,980	10,998	11,095	11,087	11,170
Other	1,771	1,796	1,800	1,802	1,817
Total	19,570	19,980	20,544	21,009	21,600
Gross tonnage:					
Tankers ——thousand tons	79,457	88,896	99,105	108,558	122,370
Bulk carriers ——do	41,746	47,199	55,009	64,822	74,660
Freighters ——do	62,960	63,159	64,038	65,179	66,790
Other ——do	12,084	12,147	12,150	11,984	11,907
Total ——do	196,247	211,401	230,302	250,543	275,727
Deadweight tonnage:					
Tankers ——do	133,421	153,075	173,196	192,894	220,481
Bulk carriers ——do	67,638	77,173	90,962	108,512	126,140
Freighters ——do	87,250	87,428	88,305	88,970	90,511
Other ——do	9,214	9,323	9,276	9,176	9,238
Total ——do	297,523	326,999	361,739	399,552	446,370

[1] Maritime Administration classification. Tankers include whaling tankers. Vessels shown here as "Other" include combination passenger and cargo, combination passenger and refrigerated cargo, and refrigerated freighters. Contribution of these vessels to mineral commodity trade is regarded as unimportant. Data are as of December 31 of year indicated.

Table 19.—World shipping (tanker and dry cargo) loadings and unloadings

(Million metric tons)

	1969	1970	1971	1972	1973
Loaded:					
Tanker cargo	1,276	1,440	1,526	1,645	1,841
Dry cargo	1,036	1,165	1,173	1,221	1,349
Total	2,312	2,605	2,699	2,866	3,190
Unloaded:					
Tanker cargo	1,243	1,403	1,505	1,633	1,833
Dry cargo	1,024	1,127	1,144	1,219	1,349
Total	2,267	2,530	2,649	2,852	3,182

Source: United Nations. Monthly Bulletin of Statistics. V. XXIX, No. 1, January 1975, p. xxiii.

Table 20.—World shipping of tanker cargo, by region
(Million metric tons)

Region	Loadings					Unloadings				
	1969	1970	1971	1972	1973	1969	1970	1971	1972	1973
Developed market economies:										
Australia, New Zealand	1	1	2	2	2	25	22	17	16	16
Canada	--	1	2	5	6	16	15	18	24	29
Japan	1	--	1	2	1	166	201	223	241	274
South Africa, Republic of	--	--	--	--	--	10	12	16	14	18
United States	4	5	4	3	3	156	162	174	206	280
Western Europe	79	100	98	110	124	620	705	737	781	847
Other	1	6	13	21	20	3	5	12	21	21
Total	86	113	120	143	156	996	1,122	1,197	1,303	1,485
Developing market economies:										
Caribbean	57	63	63	60	62	79	89	100	100	107
Far East	51	59	64	81	88	74	83	91	102	104
Near East	586	659	762	856	1,008	12	13	12	14	14
North Africa	210	226	183	170	171	17	18	17	17	11
Other Africa	35	63	84	101	109	14	14	15	16	16
Venezuela	178	181	169	152	155	--	--	--	--	--
Other Latin America	11	11	9	13	17	35	44	48	52	60
Other	--	--	1	1	1	3	1	2	2	4
Total	1,128	1,262	1,335	1,434	1,611	234	262	285	303	316
Centrally planned economies:										
U.S.S.R	58	61	68	65	70	1	3	5	8	13
Other	4	4	3	3	4	13	16	18	19	19
Total	62	65	71	68	74	14	19	23	27	32

Source: United Nations. Monthly Bulletin of Statistics. V. XXIX, No. 1, January 1975, pp. xxiii–xxvi.

Table 21.—World shipping of dry cargo, by region
(Million metric tons)

Region	Loadings					Unloadings				
	1969	1970	1971	1972	1973	1969	1970	1971	1972	1973
Developed market economies:										
Australia, New Zealand	72	93	115	121	140	16	15	16	16	19
Canada	70	95	94	94	107	36	38	37	38	38
Japan	40	42	51	51	55	204	235	238	276	314
South Africa, Republic of	12	15	15	18	18	4	6	7	7	8
United States	177	213	182	206	247	125	131	133	135	142
Western Europe	231	239	240	258	248	416	460	449	466	506
Other	3	2	4	2	2	5	6	5	4	6
Total	605	699	701	750	817	806	891	885	942	1,033
Developing market economies:										
Caribbean	27	32	29	27	29	11	13	13	13	13
Far East	85	94	98	102	119	68	69	80	81	96
Near East	8	9	9	11	10	19	19	24	25	30
North Africa	29	28	28	29	31	17	17	20	22	26
Other Africa	71	75	74	75	85	19	23	25	23	26
Venezuela	21	23	27	28	28	4	4	4	5	5
Other Latin America	93	105	109	101	128	31	32	32	34	43
Other	10	--	9	7	10	1	3	3	4	3
Total	344	366	383	380	440	170	180	201	207	242
Centrally planned economies:										
U.S.S.R	47	46	45	44	43	10	11	10	22	24
Other	40	44	44	47	49	37	45	48	48	51
Total	87	90	89	91	92	47	56	58	70	75

Source: United Nations. Monthly Bulletin of Statistics. V. XXIX, No. 1, January 1975, pp. xxiii–xxvi.

Table 22.—Distribution of world oil tanker tonnage, by size group [1]

Size group (deadweight tons)	1966		1973			
			In service		New building in progress or on order at yearend	
	Million deadweight tons	Percent of total	Million deadweight tons	Percent of total	Million deadweight tons [2]	Percent of total
Under 25,000	30.0	30.2	27.0	12.3	1.1	0.6
25,000–45,000	25.3	25.5	29.5	13.4	6.4	3.2
45,000–65,000	21.2	21.3	22.4	10.2	1.5	.8
65,000–125,000	21.8	21.9	41.6	18.9	22.8	11.5
125,000–205,000	1.1	1.1	14.8	6.7	22.3	11.3
205,000–285,000	--	--	78.2	35.5	80.4	40.7
285,000 and over	--	--	6.5	3.0	63.1	31.9
Total	99.4	100.0	([3])220.0	100.0	197.6	100.0

[1] Includes vessels 2,000 deadweight tons and over.
[2] Excludes 11.0 million deadweight tons combined carriers.
[3] Data differ slightly from total given in table 18 because of difference in source.

Source: British Petroleum Co. Ltd. BP Statistical Review of the World Oil Industry. Bayard Press, London, 1966, p. 15; 1973, p. 14.

Table 23.—Commercial ocean traffic through the Panama Canal in terms of number of transits and total cargo moved, by type of vessel

	Ore ships	Tankers	Combination carriers	Container cargo ships	Dry bulk carriers	General cargo ships	Other	Total
1972								
Number of transits:								
In ballast:								
Atlantic to Pacific	1	53	9	1	350	260	592	1,266
Pacific to Atlantic	--	667	1	--	70	129	130	997
Total	1	720	10	1	420	389	722	2,263
Laden:								
Atlantic to Pacific	3	906	44	185	1,155	2,766	630	5,689
Pacific to Atlantic	3	256	9	170	1,304	2,892	1,180	5,814
Total	6	1,162	53	355	2,459	5,658	1,810	11,503
In ballast and laden:								
Atlantic to Pacific	4	959	53	186	1,505	3,026	1,222	6,955
Pacific to Atlantic	3	923	10	170	1,374	3,021	1,310	6,811
Grand total	7	1,882	63	356	2,879	6,047	2,532	13,766
Cargo moved (thousand metric tons):								
Atlantic to Pacific	115	15,096	2,030	1,180	28,605	15,487	1,126	63,639
Pacific to Atlantic	106	4,150	382	1,281	21,806	16,789	2,772	47,286
Total	221	19,246	2,412	2,461	50,411	32,276	3,898	110,925
1973								
Number of transits:								
In ballast:								
Atlantic to Pacific	--	130	6	1	150	136	758	1,181
Pacific to Atlantic	--	472	2	1	71	142	145	833
Total	--	602	8	2	221	278	903	2,014
Laden:								
Atlantic to Pacific	--	785	54	331	1,471	2,640	620	5,901
Pacific to Atlantic	--	382	9	371	1,367	2,570	1,227	5,926
Total	--	1,167	63	702	2,838	5,210	1,847	11,827
In ballast and laden:								
Atlantic to Pacific	--	915	60	332	1,621	2,776	1,378	7,082
Pacific to Atlantic	--	854	11	372	1,438	2,712	1,372	6,759
Grand total	--	1,769	71	704	3,059	5,488	2,750	13,841

Table 23.—Commercial ocean traffic through the Panama Canal in terms of number of transit and total cargo moved, by type of vessel—Continued

	Ore ships	Tankers	Combination carriers	Container cargo ships	Dry bulk carriers	General cargo ships	Other	Total
1973—Continued								
Cargo moved (thousand metric tons):								
Atlantic to Pacific	--	14,499	2,690	2,649	37,095	16,349	1,270	74,552
Pacific to Atlantic	--	9,248	422	3,376	22,089	15,493	2,881	53,509
Total	--	23,747	3,112	6,025	59,184	31,842	4,151	128,061

Source: Panama Canal Co. Annual Reports for 1972 and 1973.

Table 24.—Movement of mineral commodities through the Panama Canal, by commodity type and direction of movement

(Thousand metric tons)

Commodity	Atlantic to Pacific			Pacific to Atlantic			Total		
	1971	1972	1973	1971	1972	1973	1971	1972	1973
METALS									
Aluminum:									
Bauxite and alumina	1,256	1,518	1,593	450	781	576	1,706	2,299	2,169
Metal, except scrap	76	76	59	89	67	93	165	143	152
Chromium, chromite	10	42	96	209	110	185	219	152	281
Copper:									
Ore and concentrate	46	28	46	249	252	557	295	280	603
Metal, except scrap	15	18	17	765	598	753	780	616	770
Iron and steel:									
Iron ore	575	478	212	3,557	1,830	2,134	4,132	2,308	2,346
Pig iron, steel ingots, other crude forms, except scrap	293	77	143	37	71	20	330	148	163
Semimanufactures (excluding tinplate)	1,890	1,499	1,796	6,494	7,793	7,993	8,384	9,292	9,789
Lead:									
Ore and concentrate	6	1	3	193	165	136	199	166	139
Metal, except scrap	6	9	6	253	209	202	259	218	208
Manganese ore and concentrate	208	184	203	122	142	116	330	326	319
Tin:									
Ore and concentrate	6	2	3	85	70	78	91	72	81
Metal (including tinplate)	129	110	122	103	109	134	232	219	256
Zinc:									
Ore and concentrate	165	168	255	349	347	530	514	515	785
Metal, except scrap	8	10	9	144	126	147	152	136	156
Other and unclassified:									
Ore and concentrate	129	122	118	789	621	765	918	743	883
Metal, except scrap	49	34	59	172	172	213	221	206	272
Metal scrap, all metals	2,689	1,415	3,286	18	57	17	2,707	1,472	3,303
NONMETALS									
Asbestos	262	183	123	55	49	54	317	232	177
Borax	10	12	4	398	392	457	408	404	461
Cement	170	152	120	15	15	42	185	167	162
Clays and clay products:									
Fire clay and kaolin	328	291	281	35	37	31	363	328	312
Brick and tile	79	75	64	131	176	149	210	251	213
Diatomaceous earth	4	14	9	52	30	48	56	44	57
Fertilizer materials:									
Nitrogenous:									
Ammonium compounds	350	400	368	26	13	28	376	413	396
Sodium nitrate	23	8	33	466	358	304	489	366	337
Phosphatic	4,544	4,276	4,655	2	2	3	4,546	4,278	4,658
Potassic	305	276	345	429	605	498	734	881	843
Unclassified	891	824	1,114	82	84	138	973	908	1,252
Sodium compounds:									
Salt	117	112	108	505	593	505	622	705	613
Other	517	680	568	29	42	17	546	722	585
Sulfur	172	101	352	428	687	755	600	788	1,107

Table 24.—Movement of mineral commodities through the Panama Canal, by commodity type and direction of movement—Continued

(Thousand metric tons)

Commodity	Atlantic to Pacific			Pacific to Atlantic			Total		
	1971	1972	1973	1971	1972	1973	1971	1972	1973
MINERAL FUELS AND RELATED MATERIALS									
Coal and coke	22,181	14,341	13,864	382	509	361	22,563	14,850	14,225
Petrochemicals	324	369	435	294	383	259	618	752	694
Petroleum:									
Crude	4,712	5,172	4,622	1,330	1,821	7,159	6,042	6,993	11,781
Refinery products	9,421	8,636	8,406	1,858	1,959	3,087	11,279	10,595	11,493
Total	51,966	41,713	43,497	20,595	21,275	28,544	72,561	62,988	72,041

Source: Panama Canal Co. Annual Report, 1973, pp. 48–51.

Table 25.—Indexes of ocean freight rates

(1963=100, unless otherwise specified)

Year and quarter	London tanker brokers panel	Trip charter					Time charter				
		West Germany		Italy (general)	Norway		United Kingdom [1]				Norway (dry cargo)
		Dry cargo	Tankers		Dry cargo	Tankers	General	9,000–16,000 deadweight tons	20,000–40,000 deadweight tons	Over 40,000 deadweight tons	
1970	119	146	250	142	122	243	181	134	168	181	166
1971	118	99	144	87	90	133	93	92	93	94	132
1972: [2]											
First quarter	105	83	69	66	73	71	79	81	79	78	112
Second quarter	98	86	108	66	76	95	82	90	75	83	110
Third quarter	NA	102	117	85	85	120	95	87	93	101	119
Fourth quarter	111	132	151	113	103	164	134	115	134	141	152
Annual average	104	98	103	NA	82	104	98	93	95	101	119
1973: [2]											
First quarter	112	--	190	NA	134	188	175	138	178	186	201
Second quarter	122	--	347	NA	164	333	212	178	218	216	239
Third quarter	165	--	461	NA	202	429	267	199	261	292	305
Fourth quarter	171	--	288	NA	266	268	358	252	350	398	346
Annual average	140	--	290	NA	178	290	253	192	252	273	261

NA Not available.

[1] The United Kingdom figures are shown with original base 1968=100. Table is further subdivided into vessel tonnage classes of deadweight tons, rather than commodity classes.

[2] Quarterly figures are for the last month in the quarter except for the United Kingdom figures, which are averages for the quarter indicated.

Source: United Nations. Monthly Bulletin of Statistics. September 1973, p. xviii; June 1974, p. xxii.

Table 26.—Nonferrous metal prices in the United States

(Average, cents per pound, unless otherwise specified)

Year and month	Aluminum [1]	Copper [2]	Lead [3]	Zinc [4]	Tin [5]	Silver [6]
1971	29.000	51.433	[7] 13.815	16.128	167.348	154.564
1972	26.409	50.617	15.029	17,752	176.875	168.380
1973:						
January	25.000	51.763	14.818	18.662	179.045	201.659
February	25.000	53.946	15.388	19.276	192.014	223.621
March	25.000	59.181	16.000	19.853	205.102	230.918
April	25.000	59.458	16.016	20.317	202.400	220.720
May	25.000	59.458	16.480	20.392	209.114	240.118
June	25.000	59.458	16.500	20.308	212.274	262.090
July	25.000	59.458	16.500	20.342	237.548	270.560
August	25.000	59.458	16.500	20.340	243.565	263.647
September	25.000	59.458	16.500	20.314	240.303	267.511
October	25.000	59.458	16.500	20.369	245.909	283.562
November	25.000	59.538	16.500	20.353	262.440	285.995
December	25.000	65.742	17.715	27.365	300.987	313.667
Annual average	25.000	58.865	16.285	20.658	227.558	255.339

[1] Unalloyed ingot, 99.5%, delivered United States.
[2] Electrolytic copper, domestic refineries, on Atlantic seaboard.
[3] Refined lead, nationwide, except as noted.
[4] Prime Western slab, f.o.b., East St. Louis.
[5] Straits tin, New York.
[6] Cents per troy ounce, 999 fine, New York.
[7] Separate St. Louis and New York prices discontinued December 13, 1971. Effective December 13, 1971, one delivered price nationwide replaced delivered New York basis quotations. Figure given here is nationwide monthly average for December 1971 only.

Source: Yearbook of the American Bureau of Metal Statistics. Fifty-third Annual Issue for the Year 1973. New York, 1974, 152 pp.

Table 27.—Nonferrous metal prices in the United Kingdom

(Average, U.S. cents per pound, unless otherwise specified) [1]

Year and month	Aluminum [2]	Copper [3]	Lead [4]	Zinc	Tin [5]	Silver [6]
1971	28.515	49.273	11.507	14.076	159.438	154.195
1972	26.603	48.545	13.678	17.117	170.899	168.569
1973:						
January	24.581	50.756	14.416	17.527	172.298	200.10
February	25.325	56.379	15.402	19.110	182.650	221.18
March	25.794	68.468	16.872	21.502	194.788	227.81
April	25.912	72.001	17.539	23.253	194.099	218.02
May	26.400	70.402	17.963	24.879	197.304	234.37
June	26.877	79.322	19.273	29.711	206.271	258.45
July	26.472	91.611	21.262	38.062	224.626	280.73
August	25.828	93.794	19.840	41.424	227.660	267.30
September	25.229	94.794	20.129	44.174	227.041	263.29
October	25.343	93.681	21.360	52.655	246.255	284.90
November	29.504	103.006	22.111	73.246	254.657	282.81
December	28.644	101.039	26.834	73.269	293.974	308.81
Annual average	26.326	80.805	19.382	38.314	218.148	254.37

[1] London Metal Exchange, average settlement prices.
[2] Ingot, 99.5%.
[3] Electrolytic wirebar.
[4] Refined pig lead, 99.97%.
[5] Standard tin.
[6] U.S. cents per troy ounce, 999 fine.

Source: Yearbook of the American Bureau of Metal Statistics. Fifty-third Annual Issue for the Year 1973. New York, 1974, 152 pp.

Table 28.—Nonferrous metal prices in Canada

(Average, U.S. cents per pound, unless otherwise specified) [1]

Year and month	Aluminum [1]	Copper [2]	Lead [3]	Zinc [3]	Silver [4]
1971	29.21	52.202	13.368	15.962	154.573
1972	(5)	51.292	15.572	18.666	168.401
1973:					
January	(5)	52.254	15.001	19.514	201.625
February	(5)	54.740	15.920	19.586	223.394
March	(5)	60.017	16.053	20.933	230.889
April	(5)	59.957	15.988	20.985	220.686
May	(5)	59.950	15.987	20.982	239.676
June	(5)	60.096	16.026	22.465	262.057
July	(5)	61.620	16.008	23.001	(6)
August	(5)	66.735	15.937	24.901	(6)
September	(5)	66.451	15.869	25.578	267.470
October	(5)	73.919	16.868	27.969	288.771
November	(5)	74.068	17.516	28.026	285.913
December	(5)	74.043	17.516	28.806	313.861
Annual average	(5)	63.662	16.224	23.568	(6)

[1] Ingot 99.5%, f.o.b., delivered basis Canadian points.
[2] Electrolytic wirebar, f.o.b., delivered Canadian points.
[3] Pig lead. Prime Western zinc; producers' prices, carload quantities, communicated by Cominco Ltd.
[4] United States cents per troy ounce, average price of Cominco Ltd.
[5] Canadian aluminum producers ceased quoting a "published' price effective May 8, 1972.
[6] Quotations suspended for July and August. No yearly average reported for 1973.

Source: Yearbook of the American Bureau of Metal Statistics. Fifty-third Annual Issue for the Year 1973. New York, 1974, 152 pp.

Table 29.—Mineral commodity export price indexes

(1963=100)

Year and quarter	Metal ores	Fuels	All crude minerals
1971	126	127	127
1972	134	143	141
1973:			
First quarter	139	153	150
Second quarter	154	163	160
Third quarter	166	179	175
Fourth quarter	184	258	241
Annual average	161	188	181

Source: United Nations. Monthly Bulletin of Statistics. New York, September 1974, p. xv.

Table 30.—Analysis of export price indexes

(1963=100)

Year and quarter	Developed areas		Developing areas	
	Total minerals	Nonferrous base metals	Total minerals	Nonferrous base metals
1971	145	151	119	161
1972	154	150	135	161
1973:				
First quarter	170	167	142	189
Second quarter	180	193	152	231
Third quarter	197	223	166	281
Fourth quarter	216	245	250	309
Annual average	191	207	178	252

Source: United Nations. Monthly Bulletin of Statistics. New York, September 1974, p. xv.

Table 31.—Leading world producers of bauxite
(Gross weight, thousand metric tons)

Country	1971	1972	1973 p
Australia	r 12,733	14,437	17,816
Jamaica	r 12,440	12,543	13,600
Surinam	6,718	7,777	8,100
U.S.S.R.e 1	r 4,100	r 4,200	4,300
Guyana	r 3,920	3,344	3,201
France	3,184	3,254	3,133
Guinea	r 1,997	2,050	3,050
Greece	2,861	2,436	2,600
Hungary	2,090	2,358	2,600
Yugoslavia	1,959	2,197	2,167
United States	2,020	1,841	1,909
Total	r 54,022	56,437	62,476
All others	8,140	8,677	8,218
Grand total	r 62,162	65,114	70,694

e Estimate. p Preliminary. r Revised.
1 Excludes nepheline concentrates and alunite ore.

Table 32.—Leading world producers of aluminum
(Thousand metric tons)

Country	1971	1972	1973 p
United States	3,561	3,740	4,109
U.S.S.R.e	1,180	1,250	1,360
Japan	893	1,015	1,103
Canada	1,017	925	934
Norway	530	548	620
Germany, West	428	445	533
France	384	394	360
United Kingdom	119	171	252
Australia	r 224	206	e 207
Netherlands	116	166	190
Italy	120	122	184
Spain	r 126	140	168
India	r 176	179	e 154
Ghana	111	144	152
Total	r 8,985	9,445	10,326
All others	r 1,339	1,559	1,791
Grand total	r 10,324	11,004	12,117

e Estimate. p Preliminary. r Revised.

Table 33.—Leading world producers of mine copper
(Copper content of ore, thousand metric tons)

Country	1971	1972	1973 p
United States 1	1,381	1,510	1,558
Canada 1	654	720	816
Chile	708	717	735
Zambia	r 651	718	707
U.S.S.R.e 1 2	620	665	700
Zaire	407	437	488
Philippines	198	214	221
Peru	r 207	219	219
Australia	r 177	187	213
Papua New Guinea	--	124	183
South Africa, Republic of	157	162	176
Poland	r 122	135	155
Yugoslavia	94	103	148
Total	r 5,376	5,911	6,319
All others	r 696	740	817
Grand total	r 6,072	6,651	7,136

e Estimate. p Preliminary. r Revised.
1 Recoverable.
2 Smelter production.

Table 34.—Leading world producers of iron ore, iron ore concentrates, and iron ore agglomerates

(Thousand metric tons)

Country	1971	1972	1973 p
U.S.S.R	203,008	208,127	216,000
United States	82,058	76,645	89,076
Australia	62,100	63,820	84,705
China, People's Republic of e	r 55,000	r 60,000	66,000
Brazil e	42,700	42,100	58,000
France	55,862	54,253	54,228
Canada	r 42,957	38,735	49,992
India	34,261	35,500	35,400
Sweden	34,367	33,124	34,811
Liberia	r 23,398	22,509	23,542
Venezuela	r 20,200	18,465	22,030
South Africa, Republic of	r10,496	11,223	10,955
Mauritania	8,457	9,400	10,480
Chile	11,225	8,640	9,402
Peru	r 8,831	9,414	8,964
Total	r 694,920	691,955	773,585
All others	r 91,671	86,634	90,878
Grand total	r 786,591	778,489	864,463

e Estimate. p Preliminary. r Revised.

Table 35.—Leading world producers of crude steel [1]

(Thousand metric tons)

Country	1971	1972	1973 p
United States	109,264	120,874	136,803
U.S.S.R	120,637	125,589	131,000
Japan	88,557	96,900	119,327
Germany, West	r 40,313	43,705	49,521
United Kingdom	r 24,174	25,321	26,676
France	22,859	24,054	25,264
China, People's Republic of e	21,000	23,000	25,000
Italy	17,452	19,815	20,995
Belgium	12,444	14,532	15,525
Poland	12,738	13,476	14,058
Canada	11,040	11,860	13,386
Czechoslovakia	12,069	12,727	13,200
Spain	r 7,794	9,554	10,740
Romania	6,803	7,401	8,161
Australia	6,736	6,744	7,682
Total	r 513,880	555,552	617,338
All others	r 67,317	73,008	76,980
Grand total	r 581,197	628,560	694,318

e Estimate. p Preliminary. r Revised.
[1] Steel ingots and castings.

Table 36.—Leading world producers of mine lead

(Lead content of ore, thousand metric tons)

Country	1971	1972	1973 p
United States [1]	525	561	547
U.S.S.R. e	450	460	470
Australia	r 404	396	406
Canada	393	376	386
Peru [1]	r 166	184	199
Mexico [1]	157	161	179
Yugoslavia	124	120	e 124
Morocco	78	87	108
Bulgaria	102	102	102
China, People's Republic of e	r 100	r 100	100
Total	r 2,499	2,547	2,621
All others	r 918	919	911
Grand total	r 3,417	3,466	3,532

e Estimate. p Preliminary. r Revised.
[1] Recoverable.

Table 37.—Leading world producers of manganese ore
(Gross weight, thousand metric tons)

Country	1971	1972	1973 p
U.S.S.R	7,318	7,819	8,000
South Africa, Republic of	3,237	3,271	4,176
Brazil	2,602	2,058	e 2,157
Gabon	1,903	1,937	1,919
India	1,842	1,642	1,535
Australia	1,050	1,168	1,522
China, People's Republic of e	1,000	1,000	1,000
Mexico	267	296	364
Zaire	r 329	369	334
Ghana	599	498	318
Japan	285	261	189
Total	r 20,432	20,319	21,514
All others	r 657	588	639
Grand total	r 21,089	20,907	22,153

e Estimate. p Preliminary. r Revised.

Table 38.—Leading world producers of mine tin
(Tin content of ore, long tons)

Country	1971	1972	1973 p
Malaysia	74,253	75,617	71,119
Bolivia	29,533	30,986	29,827
U.S.S.R. e	28,000	r 28,500	29,000
Indonesia	19,411	20,992	22,135
Thailand	21,346	22,072	20,591
China, People's Republic of e	20,000	20,000	20,000
Australia	r 9,876	11,808	10,369
Nigeria	7,210	6,844	5,744
Total	r 209,629	216,819	208,785
All others	r 21,763	23,337	24,063
Grand total	r 231,392	240,156	232,848

e Estimate. p Preliminary. r Revised.

Table 39.—Leading world producers of mine zinc
(Zinc content of ore, thousand metric tons)

Country	1971	1972	1973 p
Canada	r 1,134	1,129	1,236
U.S.S.R. e	650	650	670
Australia	r 453	507	478
United States	456	434	434
Peru	r 318	376	412
Mexico	265	272	271
Japan	294	281	264
Poland	194	195	e 210
Korea, North e	135	140	145
Germany, West	132	122	123
Sweden	99	114	119
China, People's Republic of e	100	100	100
Yugoslavia	99	97	e 100
Spain	88	89	94
Zaire	r 109	100	88
Total	r 4,526	4,606	4,744
All others	r 843	889	959
Grand total	r 5,369	5,495	5,703

e Estimate. p Preliminary. r Revised.

Table 40.—Leading world producers of hydraulic cement
(Thousand metric tons)

Country	1971	1972	1973 p
U.S.S.R	r 100,331	104,299	109,500
United States (including Puerto Rico)	r 72,861	76,708	79,377
Japan	r 59,434	66,333	78,024
Germany, West	41,013	43,145	40,860
Italy	r 35,052	36,882	39,961
France	r 28,848	30,245	30,720
China, People's Republic of e	r 11,500	14,000	15,000
Spain (including the Canary Islands)	r 17,161	19,500	22,236
United Kingdom	r 17,697	18,048	19,986
Poland	13,082	13,986	15,548
India	14,894	15,700	15,000
Brazil	9,803	11,381	13,398
Germany, East	8,473	8,857	9,548
Canada	8,225	9,050	9,874
Romania	8,523	9,212	9,848
Mexico	r 7,360	8,602	9,787
Turkey	r 7,553	8,424	8,952
Czechoslovakia	7,956	8,045	8,381
Total	r 469,766	502,417	536,000
All others	r 139,014	147,044	158,396
Grand total	r 608,780	649,461	694,396

e Estimate. p Preliminary. r Revised.

Table 41.—Leading world producers of nitrogen fertilizer compounds
(Thousand metric tons of contained nitrogen)

Country	1971	1972	1973 p
United States (including Puerto Rico)	8,161	8,091	8,472
U.S.S.R	5,423	6,055	e 6,800
Japan	2,105	2,125	2,454
China, People's Republic of e	1,230	r 1,663	2,055
France	1,351	1,417	1,472
Germany, West	1,505	1,321	1,471
Netherlands	r 957	1,038	1,205
Poland	1,030	1,081	1,147
India	838	946	1,051
Italy	956	1,034	1,046
Romania	647	827	874
Total	r 24,203	25,598	28,047
All others	r 8,716	9,455	10,765
Grand total	r 32,919	35,053	38,812

e Estimate. p Preliminary. r Revised.
1 Year ending June 30 of that stated.

Table 42.—Leading world producers of phosphate rock 1
(Thousand metric tons)

Country	1971	1972	1973 p
United States	35,277	37,042	38,226
U.S.S.R. 2	20,246	20,982	23,000
Morocco	12,008	14,971	17,077
Tunisia	3,162	3,387	3,473
China, People's Republic of e	1,700	2,000	2,300
Nauru 3	1,867	1,340	2,323
Total	r 74,260	79,722	86,399
All others	11,196	11,667	13,596
Grand total	r 85,456	91,389	99,995

e Estimate. p Preliminary. r Revised.
1 Includes output of all major crude mineral sources of phosphate.
2 Includes material described as sedimentary rock in Soviet sources.
3 Exports.

Table 43.—Leading world producers of marketable potash
(Thousand metric tons K_2O equivalent)

Country	1971	1972	1973 p
U.S.S.R	4,807	5,433	5,900
Canada	r 3,628	3,495	4,021
Germany, West	r 2,815	2,845	2,548
Germany, East	2,426	2,458	2,556
United States	r 2,348	2,412	2,361
France	2,000	1,760	2,263
Total	r 18,024	18,403	19,649
All others	r 1,944	2,005	1,915
Grand total	r19,968	20,408	21,564

p Preliminary. r Revised.

Table 44.—Leading world producers of pyrite
(Gross weight, thousand metric tons)

Country	1971	1972	1973 p
U.S.S.R. e	r 7,000	r 7,200	7,300
Spain	r 2,440	2,140	2,188
China, People's Republic of e	2,000	2,000	2,000
Japan	2,343	1,579	1,275
Italy	r 1,504	1,382	1,169
Romania e	840	840	870
Norway	r 778	795	792
Finland	866	857	777
Sweden	r 592	486	450
United States	821	753	568
South Africa, Republic of	750	439	551
Germany, West	r 495	422	446
Portugal	559	553	532
Korea, North e	500	500	500
Total	r 21,488	19,946	19,418
All others	r 3,760	3,272	2,692
Grand total	r 25,248	23,218	22,110

e Estimate. p Preliminary. r Revised.

Table 45.—Leading world producers of salt
(Thousand metric tons)

Country	1971	1972	1973 p
United States (including Puerto Rico)	40,012	40,869	39,862
China, People's Republic of e	16,500	18,000	18,000
U.S.S.R	12,000	12,200	12,200
Germany, West	8,921	8,464	e 9,450
United Kingdom e	r 9,207	8,778	8,518
India	5,430	6,520	7,004
France	r 5,635	5,404	e 6,304
Canada	5,028	4,914	4,833
Mexico	4,360	4,558	e 4,600
Italy	r 4,574	4,018	e 4,427
Australia	r 3,849	e 4,000	e 4,000
Romania	2,948	3,147	e 3,296
Poland	r 2,962	3,010	3,079
Netherlands	3,167	2,803	3,044
Germany, East	2,221	2,187	e 2,286
Brazil	1,477	2,168	1,855
Spain	r 1,979	1,865	2,022
Columbia	638	1,023	1,313
Bahamas	1,213	807	1,121
Japan	946	687	1,015
Argentina	824	1,005	e 1,005
Total	133,891	136,427	139,234
All others	r 10,518	10,909	11,515
Grand total	r 144,409	147,336	150,749

e Estimate. p Preliminary. r Revised.

Table 46.—Leading world producers of elemental sulfur
(Thousand metric tons)

Country	1971	1972	1973 p
United States	8,758	9,388	10,182
Canada	4,796	6,949	7,407
U.S.S.R. e	r 3,700	r 3,900	4,150
Poland e	2,727	2,941	3,562
France	r 1,801	1,730	1,810
Mexico	1,178	944	1,608
Iran	497	669	778
Japan	409	499	681
Iraq e	60	247	535
Germany, West	184	219	333
Total	r 24,110	27,486	31,046
All others	r 1,448	1,556	1,521
Grand total	r 25,558	29,042	32,567

e Estimate. p Preliminary. r Revised.

Table 47.—Leading world producers of coal (all grades)
(Million metric tons)

Country	1971			1972			1973 p		
	Lignite	Bituminous and anthracite	Total	Lignite	Bituminous and anthracite	Total	Lignite	Bituminous and anthracite	Total
U.S.S.R. [1]	153	r 563	r 716	156	575	731	e 158	e 586	744
United States	6	503	509	10	537	547	13	530	543
China, People's Republic of e	(2)	r 390	r 390	(2)	r 400	r 400	(2)	430	430
Germany, East	263	e 1	264	248	e 1	249	246	e 1	247
Germany, West	r 105	[3] 117	r 222	110	108	218	119	97	216
Poland	35	145	180	38	151	189	39	157	196
United Kingdom	--	147	147	--	120	120	--	130	130
Czechoslovakia	85	29	r 114	86	28	114	81	28	109
Australia	23	49	72	24	60	84	25	61	86
India	4	71	75	3	75	78	3	77	80
South Africa, Republic of	--	59	59	--	58	58	--	62	62
Korea, North e	(4)	30	r 30	(4)	34	34	(4)	37	37
Yugoslavia	30	1	31	30	1	31	32	1	33
France	3	33	36	3	30	33	3	26	29
Hungary	23	r 3	r 26	22	3	25	23	3	26
Bulgaria	27	(4)	27	26	(4)	26	26	(4)	26
Japan	(4)	r 34	34	(4)	29	29	(4)	23	23
Total	r 757	r 2,175	r 2,932	756	2,210	2,966	768	2,249	3,017
All others	r 43	94	137	48	90	138	51	91	142
Grand total	800	r 2,269	r 3,069	804	2,300	3,104	819	2,340	3,159

e Estimate. p Preliminary. r Revised.
[1] Excludes output from the U.S.S.R. controlled portion of Svalbard (Spitzbergen).
[2] Output small, included under anthracite and bituminous.
[3] Including pech coal.
[4] Less than ½ unit.

Table 48.—Leading world producers of marketed natural gas
(Billion cubic feet)

Country	1971	1972	1973 p
United States	22,493	22,532	22,648
U.S.S.R	7,501	7,818	8,334
Canada	2,499	2,914	3,119
Netherlands	1,536	2,052	2,495
Romania	r 892	926	976
United Kingdom	r 657	943	1,018
Iran	299	448	702
Germany, West	555	634	681
Italy	473	501	541
Mexico	479	496	542
Venezuela	368	388	460
France	252	260	266
Germany, East	101	184	e 245
Argentina	r 228	218	e 235
Poland	190	206	213
Total	r 38,523	40,520	42,475
All others	r 1,747	2,067	2,387
Grand total	r 40,270	42,587	44,862

e Estimate. p Preliminary. r Revised.

Table 49.—Leading world producers of crude oil
(Million 42-gallon barrels)

Country	1971	1972	1973 p
United States	3,454	3,455	3,361
U.S.S.R	2,772	2,943	3,094
Saudi Arabia	1,741	2,202	2,773
Iran	1,662	1,839	2,139
Venezuela	1,295	1,178	1,229
Kuwait	1,167	1,201	1,102
Libya	1,008	820	794
Nigeria	558	665	750
Iraq	624	539	741
Canada	492	561	654
United Arab Emirates [1]	387	440	559
Indonesia	326	395	489
Algeria	280	386	401
China, People's Republic of e	r 268	r 314	375
Qatar	157	177	208
Mexico	177	161	165
Argentina	155	158	154
Australia	113	120	142
Oman	107	103	107
Romania	103	105	106
Brunei	47	67	79
Total	r 16,893	17,829	19,422
All others	r 853	891	939
Grand total	17,746	18,720	20,361

e Estimate. p Preliminary. r Revised.
[1] Abu Dhabi and Dubai, formerly listed under Trucial States.

Table 50.—Major world trade in bauxite and alumina in 1972 [1]

(Thousand metric tons)

Source country	1972 production by source country [2]	1972 export by source country [2]	Recipient country [3]													
			Austria	Canada	France	West Germany	Italy	Japan	Netherlands	Norway	Spain	Sweden	United Kingdom	United States [4]	U.S.S.R.	Selected others [5]
Bauxite:																
Australia	14,437	[e] 8,300	--	--	303	1,405	177	3,009	--	--	--	8	9	505	--	147
Dominican Republic	1,035	1,311	--	--	--	--	--	--	--	--	--	--	--	1,040	--	--
France	3,254	86	--	--	XX	58	6	--	--	--	--	--	9	--	--	8
Ghana	362	316	--	99	--	--	--	--	--	--	19	--	220	--	--	--
Greece	2,436	1,011	--	--	110	88	--	7	141	--	42	24	60	3	441	13
Guinea	2,050	[e] 700	--	--	--	--	34	--	--	--	--	--	--	66	328	35
Guyana	3,344	2,326	2	1,597	57	63	38	17	4	--	28	11	3	719	--	51
Haiti	687	770	--	--	--	--	--	--	--	--	--	--	--	492	--	--
Hungary	2,358	662	--	--	--	59	--	--	--	--	--	--	--	--	--	--
India	1,684	16	--	--	--	--	13	3	--	--	--	--	8	--	--	--
Indonesia	1,277	[e] 1,250	--	135	--	--	17	1,074	--	--	--	--	--	8,357	--	52
Jamaica	12,543	7,162	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Malaysia	1,076	987	--	109	--	--	--	822	--	--	--	--	--	15	--	--
Sierra Leone	694	694	--	350	--	224	76	--	--	--	--	--	6	2,575	--	12
Surinam	7,777	[6] 3,746	22	307	29	27	7	6	--	--	--	--	--	XX	--	--
United States	1,841	30	--	26	--	2	10	56	--	--	1	3	--	--	794	--
Yugoslavia	2,197	1,813	6	--	--	356	267	--	--	--	3	--	--	--	--	--
Other and not specified	6,062	NA	(7)	--	19	49	33	3	1	--	8	(7)	4	1	152	18
Total	65,114	NA	30	2,623	518	2,331	678	4,997	146	--	101	46	319	13,773	1,715	336
Alumina:																
Australia	3,068	2,421	--	217	--	--	--	542	--	--	--	--	--	1,060	--	164
Canada	1,149	[8] 22	--	XX	2	--	1	--	--	--	(7)	--	1	174	--	--
France	1,112	384	(7)	(7)	XX	27	124	(7)	5	24	--	(7)	1	21	--	23
Germany, West	916	207	95	(7)	5	XX	8	(7)	116	2	--	28	5	1	--	25
Greece	476	237	--	--	--	--	9	--	37	--	--	--	--	97	--	--
Guinea	663	[e] 660	16	--	--	89	--	--	--	107	126	--	5	5	--	54
Guyana	238	261	--	1	--	--	21	--	--	16	--	--	--	52	--	--
Hungary	520	485	64	--	--	--	--	--	--	--	--	--	--	--	244	8
Jamaica	[9] 2,416	2,416	--	207	--	--	--	--	--	484	--	151	299	679	--	20
Japan	1,644	220	--	--	--	--	--	XX	--	--	--	--	--	125	--	20
Surinam	1,378	1,278	--	--	--	184	16	--	189	103	--	--	--	518	--	68
United States	6,328	797	(7)	248	1	12	3	1	(7)	225	(7)	21	2	XX	243	1
Yugoslavia	135	23	6	--	--	--	--	--	--	--	--	--	--	--	--	--
Other and not specified	3,573	NA	1	(7)	2	(7)	4	5	(7)	73	5	2	3	11	211	8
Total	23,616	NA	182	673	10	312	186	548	347	1,034	131	202	316	2,743	698	391

See footnotes at end of table.

e Estimate. NA Not available. XX Not applicable.

1 Data presented are compiled from import statistics of countries listed as recipient countries unless otherwise specified and, as such, are incomplete, but are believed to account for the overwhelming share of total world movement of bauxite and alumina.

2 Unless otherwise specified, figures are those reported in latest country chapter of Volume III, Minerals Yearbook. Data on bauxite production is on dry equivalent basis for a number of countries, and as such may be reported on a different basis from bauxite exports, which almost universally are on a gross weight basis and which were obtained from the Statistical Office of the United Nations and other sources. Data on alumina production are generally for output prior to calcination, while data on alumina exports, also from the Statistical Office of the United Nations and official country source data, include aluminum hydroxide and thus may not be exactly comparable.

3 Countries selected are most of the world's significant aluminum producers that depend upon imports of bauxite and/or alumina for a significant share of their raw material requirements, plus a few minor countries for which data were readily available. Data are from the Statistical Office of the United Nations except for the U.S.S.R. and Canadian figures, which are from official Soviet and Canadian sources.

4 Includes U.S. Virgin Islands.

5 Countries included are as follows: Bauxite—Belgium, Denmark, Finland, Iceland, Luxembourg, New Zealand, Switzerland, and Yugoslavia; alumina—Australia, Belgium, Denmark, Finland, Greece, Israel, Luxembourg, New Zealand, Portugal, Switzerland, and Yugoslavia.

6 Official export; differs from figure in country chapter of Minerals Yearbook, Volume III.

7 Less than ½ unit.

8 Excludes artificial corundum, which may account for the large difference in figures.

9 Figure reported by the Statistical Office of the United Nations as being based on Jamaican exports.

Table 51.—Major world trade in unrefined and unwrought copper in 1972 [1]

(Thousand metric tons)

Source country	Destination															
	Belgium-Luxembourg	Brazil	Czechoslovakia	France	Germany East	Germany West	Italy	Japan	Netherlands	Spain	Sweden	Switzerland	United Kingdom	United States	Other and unspecified	Total [2]
Belgium-Luxembourg	XX	--	--	117	--	68	29	--	1	1	(3)	--	12	--	(3)	229
Canada	9	1	--	11	--	31	5	1	1	1	5	2	135	136	8	346
Chile [4]	8	8	(3)	32	--	122	54	45	5	5	20	2	83	67	[5]104	556
Germany, West	28	4	1	23	--	XX	18	(3)	3	6	1	10	19	--	33	145
Peru [4]	14	--	--	--	--	16	--	8	--	--	--	--	2	92	[6]38	169
U.S.S.R	--	1	35	--	--	11	(3)	--	53	--	--	--	12	--	[7]46	158
United Kingdom	(3)	(3)	--	1	--	16	14	4	8	5	2	1	XX	4	6	60
United States	10	15	--	23	--	27	26	30	3	(3)	2	1	11	XX	26	174
Zaire [4]	257	--	--	33	--	12	45	10	7	--	--	--	5	--	[8]53	424
Zambia [4]	5	47	--	72	--	65	89	164	4	16	17	11	141	--	[9]78	710
Other and unspecified [10]	6	(3)	(3)	40	(3)	99	12	13	3	2	5	3	50	35	37	305
Total [2]	338	74	36	352	(3)	468	293	274	88	36	53	31	471	333	428	3,277

XX Not applicable.

[1] Unless otherwise specified, data are compiled from export statistics for countries listed as source countries in stub of table.

[2] Detail may not add to listed total due to rounding.

[3] Less than ½ unit.

[4] Source: World Bureau of Metal Statistics, World Metal Statistics, V. 27, No. 12, 1974.

[5] Includes 45,000 tons to the People's Republic of China and 28,200 tons to Argentina.

[6] Includes 13,000 tons to the People's Republic of China.

[7] Includes 29,200 tons to Hungary.

[8] Includes 6,000 tons to India and 4,000 tons to Greece.

[9] Includes 30,000 tons to India and 16,000 tons to the People's Republic of China.

[10] Includes the following countries (total exports in thousand tons in parentheses following names): Australia (62); Austria (7); Denmark (8); Finland (7); France (11); Italy (54); Japan (26); the Netherlands (26); New Zealand (2); Norway (18); Spain (8); Switzerland (1); and Yugoslavia (90).

Table 52.—Major world trade in iron ores, concentrates, and agglomerates (excluding roasted pyrite) [1] in 1972

(Thousand metric tons)

Source country	Recorded total 1972 export of source country [3]	Recorded imports of principal recipient country [2]						
		Canada	United States	Belgium-Luxembourg	Czechoslovakia	France	Germany, West	Hungary
Algeria	[4] 2,300	--	--	478	--	15	--	--
Angola	5,125	--	--	51	--	853	917	--
Australia	54,080	--	698	855	--	700	1,662	--
Brazil	30,512	36	1,132	1,477	248	3,181	8,330	--
Canada	28,724	XX	18,460	53	--	15	2,197	--
Chile	7,027	--	313	--	--	--	--	--
France	19,072	--	--	14,438	--	XX	3,972	--
India	21,864	--	--	153	674	(5)	13	100
Liberia	22,978	162	2,805	1,104	--	1,613	6,758	--
Malaysia	366	--	--	--	--	--	--	--
Mauritania	[4] 8,618	--	40	1,211	--	2,364	725	--
Norway	2,919	--	(5)	[6] 9	--	1	[6] 2,755	--
Peru	[e] 9,000	--	1,340	1	--	396	61	--
Philippines	2,306	--	11	--	--	--	--	--
Sierra Leone	2,283	--	--	--	--	--	658	--
South Africa, Republic of	5,120	--	26	2	--	--	(5)	--
Spain	1,896	--	(5)	78	--	460	747	--
Sweden	28,069	57	277	[6] 7,691	368	1,373	[6] 8,696	--
U.S.S.R	38,400	--	--	--	[7] 11,396	(5)	349	[7] 3,492
United States	2,129	1,497	XX	--	--	(5)	5	--
Venezuela	[e] 18,000	--	11,101	428	--	158	2,605	--
Other countries and origin unreported [8]	2,144	1	132	49	--	430	220	--
Total	312,932	1,753	36,335	28,078	[9] 12,686	11,559	40,670	[9] 3,592

Source country	Recorded imports of principal recipient country [2]							
	Italy	Netherlands	Poland	Romania	United Kingdom	Other Europe [10]	Japan	Total of listed imports
Algeria	--	--	3	--	--	--	--	496
Angola	--	--	--	--	369	387	2,563	5,140
Australia	1,316	(5)	--	--	1,266	532	48,295	55,324
Brazil	2,077	1,064	230	--	1,958	2,445	9,335	31,513
Canada	951	454	--	--	3,762	782	2,075	28,749
Chile	--	--	--	--	--	--	6,684	6,997
France	15	(5)	--	--	--	--	--	18,425
India	1	--	429	[7] 1,317	--	263	17,901	20,851
Liberia	4,130	1,773	--	--	731	700	2,752	22,528
Malaysia	--	--	--	--	--	--	388	388
Mauritania	1,182	--	--	--	1,720	527	1,088	8,857
Norway	[6] 36	[6] 697	281	--	[6] 922	361	--	5,062
Peru	--	--	--	--	--	--	6,940	8,738
Philippines	--	--	--	--	--	--	2,455	2,466
Sierra Leone	--	663	--	--	--	--	1,246	2,567
South Africa, Republic of	23	--	--	--	87	29	4,579	4,746
Spain	172	131	--	--	195	--	--	1,783
Sweden	[6] 136	[6] 884	981	--	[6] 3,698	880	535	25,576
U.S.S.R	1,115	--	10,624	[7] 4,528	1,045	3,121	1,115	36,785
United States	45	--	--	--	--	144	624	2,315
Venezuela	1,493	--	--	--	1,555	--	--	17,340
Other countries and origin unreported [8]	616	--	--	[11] 1,770	43	93	[12] 2,926	6,280
Total	13,308	5,666	12,548	7,615	17,351	10,264	111,501	312,926

[e] Estimate. XX Not applicable.

[1] Disparities between recorded total exports of source countries and totals of recorded imports of recipient countries from each listed source country are generally due to (1) time lag between shipment and receipt, and (2) the fact that the latter totals are incomplete, representing only the imports of the nations listed in the column heads and in footnote 10.

[2] Source: Unless otherwise specified, data are compiled from official import statistics of listed recipient countries.

[3] Source: Unless otherwise specified, data are compiled from official export statistics of listed source countries.

[4] Source: Boudet, E. Panorama de l'Industrie Minière du Continent Africain en 1972. Annales des Mines, October 1973, pp. 88–122.

[5] Less than ½ unit.

[6] Figures adjusted from those reported in official import statistics of Belgium–Luxembourg, West Germany, Italy, the Netherlands, and the United Kingdom, to adjust for ores originating in Sweden and recorded as a part of the exports of that country in official Swedish export statistics, but

shipped through Narvik, Norway, and as a result credited in recipient country's import statistics as originating in Norway.

[7] Source: Official export statistics of listed source country.

[8] Summation of recorded exports for the following countries (exports of each in thousand tons follow the country name in parentheses): Austria (1); Belgium–Luxembourg (3); Bolivia (1); Czechoslovakia (54); Denmark (8); Finland (8); West Germany (5); Hong Kong (173); Korea, North (527—Japanese imports only); Korea, Republic of (475); Morocco (148—imports of West Germany, Italy, and Portugal); the Netherlands (77); Poland (1); Tunisia (664).

[9] No total officially reported; figure is a summation of reported exports of source countries to this recipient country.

[10] Includes the following countries with recorded total imports as indicated in parentheses in thousand tons: Austria (1,504); Finland (771); East Germany (2,733 from the U.S.S.R. only); Greece (427); Norway (13); Portugal (366); Spain (4,147); Switzerland (20); Yugoslavia (283).

[11] Derived; difference between reported total and sum of reported exports of source countries to this recipient country.

[12] Includes receipts from the following countries (quantities in thousand metric tons): New Zealand—1,080; North Korea—527; Republic of Korea—469; Mozambique—334 (reported, but probably originating in the Republic of South Africa or Swaziland); Indonesia—268; Hong Kong—172; and Panama—76.

Table 53.—Major world trade in steel ingots and semimanufactures in 1972, by area
(Thousand metric tons)

Exporting country and area	Destination [1]						
	North America			Europe			
	Canada	United States	Latin America [2]	European Economic Community	European Free Trade Association	Other market countries	Centrally planed economy countries [3]
North America:							
Canada [6]	XX	1,028.9	102.5	56.4	58.1	25.5	24.9
United States	650.8	XX	644.1	410.8	139.7	138.5	12.0
Total	650.8	1,028.9	746.6	467.2	197.8	164.0	36.9
Europe:							
Market economy countries:							
European Economic Community:							
Belgium-Luxembourg	113.0	1,439.0	155.0	9,993.0	1,205.0	322.0	386.0
France	128.0	1,258.0	267.0	3,574.0	1,189.0	395.0	268.0
Germany, West [7]	246.2	2,083.2	344.2	5,585.7	2,206.1	766.1	1,446.9
Italy	43.1	376.9	68.5	1,652.5	285.1	219.0	322.0
Netherlands [8]	--	593.0	107.0	1,844.0	781.0	247.0	84.0
Subtotal	530.3	5,750.1	941.7	22,649.2	5,666.2	1,949.1	2,506.9
European Free Trade Association:							
Austria	7.6	31.2	10.1	701.5	347.8	85.2	220.9
Denmark	--	.1	.7	81.7	163.7	6.6	.6
Norway	--	4.0	1.8	149.0	344.8	39.5	.2
Portugal	--	--	1.7	4.4	1.0	4.5	.1
Sweden	17.0	127.0	34.0	467.0	710.0	136.0	77.0
Switzerland [9]	1.6	8.6	.4	67.6	44.0	6.8	.4
United Kingdom	155.6	1,086.0	408.6	468.3	555.3	753.2	186.0
Subtotal	181.8	1,256.9	457.3	1,939.5	2,166.6	1,031.8	485.2
Other:							
Finland	--	17.9	--	154.1	299.9	7.3	71.8
Greece	--	59.1	--	21.3	.2	21.4	.1
Spain [9]	.1	87.9	255.8	593.6	128.7	11.0	247.8
Yugoslavia	--	5.0	--	53.0	35.0	1.0	251.0
Subtotal	.1	169.9	255.8	822.0	463.8	40.7	570.7
Centrally planned economy countries:							
Bulgaria	--	--	6.9	277.2	65.1	241.7	355.2
Czechoslovakia	101.8	26.5	2.2	713.2	379.6	309.5	990.1
Germany, East [10]	NA	.7	NA	76.6	27.2	47.1	NA
Hungary	--	--	12.3	226.1	146.6	225.2	241.1
Poland	21.7	127.1	132.6	105.3	156.7	171.5	630.0
Romania [11]	--	--	--	248.8	39.9	81.7	472.1
U.S.S.R	--	--	202.0	100.4	93.9	285.4	5,311.9
Subtotal	123.5	154.3	356.0	1,747.6	909.0	1,362.1	8,000.4
Total	835.7	7,331.2	2,010.8	27,158.3	9,205.6	4,383.7	11,563.2
Africa: South Africa, Republic of	8.0	53.1	9.1	77.6	89.7	13.7	--
South Asia and Far East:							
India	1.7	6.4	.8	.5	1.0	.2	87.4
Japan	698.0	5,658.0	2,007.0	1,116.0	777.0	657.0	665.0
Total	699.7	5,664.4	2,007.8	1,116.5	778.0	657.2	752.4
Oceania: Australia [12]	12.0	72.0	23.0	31.0	11.0	14.0	--
Grand total	2,206.2	14,149.6	4,797.3	28,850.6	10,282.1	5,232.6	12,352.5

See footnotes at end of table.

Table 53.—Major world trade in steel ingots and semimanufactures in 1972, by area—Continued

(Thousand metric tons)

Exporting country and area	Destination[1]							
			South Asia and Far East					
	Africa	Near East[4]	Japan	Other market economy countries	Centrally planned economy countries[5]	Oceania	Unallocated	Total
North America:								
Canada[6]	3.3	11.1	0.2	12.5	1.9	15.7	--	1,341.0
United States	62.8	167.0	13.3	335.3	33.7	23.2	--	2,631.2
Total	66.1	178.1	13.5	347.8	35.6	38.9	--	3,972.2
Europe:								
Market economy countries:								
European Economic Community:								
Belgium-Luxembourg	323.0	171.0	--	105.0	24.0	9.0	--	14,245.0
France	722.0	288.0	--	84.0	47.0	24.0	19.0	8,263.0
Germany, West[7]	286.2	318.3	.8	311.4	287.2	8.0	--	13,890.3
Italy	414.4	215.6	.4	29.1	134.6	1.4	14.8	3,777.4
Netherlands[8]	25.0	73.0	1.0	21.0	8.0	--	6.0	3,790.0
Subtotal	1,770.6	1,065.9	2.2	550.5	500.8	42.4	39 8	43,965.7
European Free Trade Association:								
Austria	13.7	41.7	.3	3.8	9.2	2.5	4.9	1,480.4
Denmark	.4	.1	--	.1	6.4	--	--	260.4
Norway	7.1	2.7	--	3.2	--	--	--	552.3
Portugal	19.7	--	--	3.1	--	--	.1	34.6
Sweden	8.0	5.0	2.0	15.0	39.0	4.0	8.0	1,649.0
Switzerland[9]	.5	.7	--	.2	--	--	3.3	134.1
United Kingdom	212.8	208.1	1.6	493.1	45.6	71.9	--	4,646.1
Subtotal	262.2	258.3	3.9	518.5	100.2	78.4	16.3	8,756.9
Other:								
Finland	--	9.1	--	--	5.1	--	.5	565.7
Greece	52.4	23.3	--	--	--	--	--	177.8
Spain[9]	83.9	54.8	--	1.7	--	--	8.2	1,473.5
Yugoslavia	--	6.0	2.0	12.0	--	--	--	365.0
Subtotal	136.3	93.2	2.0	13.7	5.1	--	8.7	2,582.0
Centrally planed economy countries:								
Bulgaria	11.4	128.8	8.0	8.6	2.1	--	--	1,105.0
Czechoslovakia	97.5	339.8	--	27.9	52.1	--	--	3,040.2
Germany, East[10]	NA	NA	NA	NA	NA	NA	1,182.4	1,334.0
Hungary	38.5	119.2	--	86.3	11.1	--	--	1,106.4
Poland	18.1	37.6	20.0	22.9	34.2	--	--	1,477.7
Romania[11]	6.7	12.2	--	--	61.3	--	274.3	1,197.0
U.S.S.R	295.6	366.5	--	115.2	115.1	--	508.6	7,394.6
Subtotal	467.8	1,004.1	28.0	260.9	275.9	--	1,965.3	16,654.9
Total	2,636.9	2,421.5	36.1	1,343.6	882.0	120.8	2,030.1	71,959.5
Africa: South Africa, Republic of	--	24.8	.1	2.6	--	1.8	238.9	519.4
South Asia and Far East:								
India	38.6	43.5	--	83.9	--	4.4	9.6	278.0
Japan	743.0	1,340.0	--	5,215.0	1,451.0	595.0	--	20,922.0
Subtotal	781.6	1,383.5	--	5,298.9	1,451.0	599.4	9.6	21,200.0
Oceania: Australia[12]	11.0	45.0	29.0	369.0	60.0	142.0	--	819.0
Grand total	3,495.6	4,052.9	78.7	7,361.9	2,428.6	902.9	2,278.6	98,470.1

NA Not available. XX Not applicable.

[1] Because some countries do not report destinations for a portion of exports (see unallocated col-

umn), figures given for distribution of those countries' exports by continental area are not exactly correct. However, such unallocated quantities are sizable only in the case of some of the centrally planned economy countries and the Republic of South Africa.

[2] All Western Hemisphere areas except the United States and Canada.

[3] Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Romania, and the U.S.S.R.

[4] Bahrain, Iran, Iraq, Jordan, Kuwait, Lebanon, Muscat and Oman, Qatar, Saudi Arabia, People's Democratic Republic of Yemen, Syria, United Arab Emirates, Turkey, and Yemen Arab Republic.

[5] Consists of the People's Republic of China, North Korea, and North Vietnam; Mongolia is included under other market economy South Asia and Far East owing to its inseparability from this group in source.

[6] Excludes heavy sections, light sections, and strip.

[7] Excludes exports to East Germany.

[8] Excludes exports to Belgium-Luxembourg, which were approximately 600,000 tons.

[9] Partial figure; derived from import data of partner countries. Source: Statistical Office of the United Nations. 1972 World Trade Annual. V. III, Walker and Co., New York, 1974, 570 pp.

[10] The distribution is composed of partial figures derived from import data of major trading partners utilizing the source in footnote 9. The total is taken from United Nations, 1973 Annual Bulletin of Steel Statistics for Europe, V. I, New York, 1974, p. 42.

[11] The distribution is from official Romanian trade statistics and does not include ingots. The total includes ingots and is taken from the source in footnote 10.

[12] Year ended June 30, 1972.

Table 54.—Major world trade in lead ores and concentrates [1]

(Thousand metric tons of contained metal unless otherwise specified)

Destination	Exporting region								
	North America	Latin America [2]	Western Europe [3]	Eastern Europe [4]	Africa	Asia	Oceania	Origin not reported by continent	Total
1972									
United States	27.4	45.1	--	--	0.4	--	18.8	--	91.7
Western Europe:									
Belgium-Luxembourg [5]	26.2	15.5	10.4	--	10.7	--	--	18.2	81.0
France	7.1	4.1	43.6	--	46.7	--	7.7	2.7	111.9
Germany, West	17.7	28.1	57.8	--	6.8	0.3	3.3	--	114.0
United Kingdom	5.0	12.4	5.3	--	--	--	--	--	22.7
Total	56.0	60.1	117.1	--	64.2	.3	11.0	20.9	329.6
Japan	88.9	16.3	--	--	--	13.0	4.3	1.2	123.7
Grand total	172.3	121.5	117.1	--	64.6	13.3	34.1	22.1	545.0
1973									
United States	16.4	43.6	.1	--	--	13.0	19.7	--	92.8
Western Europe:									
Belgium-Luxembourg [6]	--	10.9	32.7	6.9	10.4	--	--	16.2	77.1
France [7]	13.4	5.4	32.8	--	25.8	--	--	--	77.4
Germany, West	18.0	6.1	56.2	--	10.6	.9	--	--	91.8
United Kingdom	--	10.8	--	--	.5	--	16.4	2.9	30.6
Total	31.4	33.2	121.7	6.9	47.3	.9	16.4	19.1	276.9
Japan	81.1	25.9	--	--	--	8.5	12.8	1.9	130.2
Grand total	128.9	102.7	121.8	6.9	47.3	22.4	48.9	21.0	499.9

[1] Imports by countries other than those listed as destinations are believed to be generally smaller than those for listed countries.

[2] Includes Mexico.

[3] Includes Yugoslavia.

[4] Includes Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Romania, and the U.S.S.R.

[5] Gross weight of ore for January through October only.

[6] Gross weight of ore for January through September only.

[7] Metal content of ore for January through September only.

Source: Monthly Bulletin of the International Lead and Zinc Study Group. Lead and Zinc Statistics, v. 13, No. 4, April 1973, p. 24; v. 14, No. 4, April 1974, p. 24.

Table 55.—Major world trade in lead bullion and refined lead [1]

(Thousand metric tons)

Destination	Exporting region								
	North America	Latin America [2]	Western Europe [3]	Eastern Europe [4]	Africa	Asia	Oceania	Origin not reported by continent	Total [5]
1972									
United States	75.8	76.9	26.4	--	8.0	0.2	35.0	1.0	223.2
Western Europe:									
Belgium-Luxembourg [6]	.5	--	13.9	--	--	--	--	2.2	16.6
France	--	--	28.5	2.0	6.7	--	--	.9	38.1
Germany, West	4.9	2.1	73.8	.6	1.5	10.4	23.9	--	117.2
Italy [7]	--	23.7	39.5	.5	14.6	13.3	--	22.4	114.0
Netherlands	--	7.1	25.2	2.8	--	1.0	9.3	--	45.4
Switzerland	2.0	3.0	15.7	.3	--	--	.9	.5	22.4
United Kingdom	46.4	--	--	--	5.9	--	153.0	.4	205.7
Other [8]	.6	r 3.3	33.6	9.8	3.2	--	--	.2	50.7
Total	54.4	r 39.2	230.2	16.0	31.9	24.7	187.1	26.6	610.1
Japan	.3	1.9	--	--	.8	1.2	--	.2	4.4
Grand total	130.5	r 118.0	256.6	16.0	40.7	26.1	222.1	27.8	837.7
1973									
United States	56.2	57.3	1.6	--	5.1	--	41.3	.1	161.6
Western Europe:									
France	1.0	--	34.6	.2	1.0	.2	--	--	37.0
Germany, West	2.9	1.4	93.4	--	1.6	15.0	17.8	--	132.1
Netherlands	1.5	6.9	12.6	2.6	--	1.7	10.9	--	36.2
Switzerland	1.3	2.6	11.8	--	--	--	1.3	--	17.0
United Kingdom	45.3	--	--	--	9.1	--	156.9	2.5	213.8
Other [9]	.7	.5	15.2	.1	4.0	--	--	--	20.5
Total	52.7	11.4	167.6	2.9	15.7	16.9	186.9	2.5	456.6
Japan	30.6	7.2	.2	--	2.0	9.0	9.1	.3	58.4
Grand total	139.5	75.9	169.4	2.9	22.8	25.9	237.3	2.9	676.6

r Revised

[1] Imports of countries other than those listed are generally small individually (except for Eastern European nations listed in footnote 4) but in aggregate apparently total about 125,000 tons per year. Total lead imports by East European countries including trade between countries of this group apparently total 70,000 tons or more per year.

[2] Includes Mexico.

[3] Includes Yugoslavia.

[4] Includes Bulgaria, Czechoslovakia, East Germany, Poland and the U.S.S.R.

[5] Reported totals.

[6] January through November.

[7] January through September.

[8] Includes Austria, Denmark, Finland, Norway, and Sweden.

[9] Includes Denmark, January through December, and Norway, January through November.

Source: Monthly Bulletin of the International Lead and Zinc Study Group. Lead and Zinc Statistics, v. 13, No. 5, May 1973, pp. 24–25; v. 14, No. 5, May 1974, p. 24.

Table 56.—Major world trade in zinc ores and concentrates [1]

(Thousand metric tons of contained metal unless otherwise specified)

Destination	Exporting region								
	North America	Latin America [2]	Western Europe [3]	Eastern Europe [4]	Africa	Asia	Oceania	Origin not reported by continent	Total
1972									
United States	123.0	92.2	6.4	--	4.3	--	5.3	--	231.2
Western Europe:									
Belgium-Luxembourg [5]	307.5	15.5	71.2	--	32.5	--	--	40.6	467.3
France	77.9	47.4	30.7	--	24.8	8.8	2.2	--	191.8
Germany, West	117.3	47.3	64.3	2.8	--	6.3	6.4	--	244.4
United Kingdom	8.2	6.1	15.3	--	--	--	21.3	8.4	59.3
Other [6]	31.7	13.8	89.4	--	--	1.2	28.1	--	164.2
Total	542.6	130.1	270.9	2.8	57.3	16.3	58.0	49.0	1,127.0
Japan	139.4	261.1	--	--	--	55.7	60.0	1.6	517.8
Grand total	805.0	483.4	277.3	2.8	61.6	72.0	123.3	50.6	1,876.0
1973									
United States	112.7	58.2	2.6	--	--	.5	6.6	--	180.6
Western Europe:									
Belgium-Luxembourg [7]	339.0	27.3	28.1	--	5.7	--	--	88.7	488.8
France [8]	42.0	37.2	42.7	--	19.8	7.5	3.0	--	152.2
Germany, West	148.2	47.8	92.6	2.7	5.6	2.0	4.8	--	303.7
United Kingdom	--	24.9	5.7	--	--	--	20.5	11.2	62.3
Other [6]	22.8	19.1	99.5	--	4.0	.4	27.1	--	172.9
Total	552.0	156.3	268.6	2.7	35.1	9.9	55.4	99.9	1,179.9
Japan	150.9	195.0	--	--	--	43.0	99.9	8.1	496.9
Grand total	815.6	409.5	271.2	2.7	35.1	53.4	161.9	108.0	1,857.4

[1] Imports by countries other than those listed as destinations are believed to be generally smaller than those for listed countries.
[2] Includes Mexico.
[3] Includes Yugoslavia.
[4] Includes Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Romania, and the U.S.S.R.
[5] Gross weight of ore for January through October only.
[6] The Netherlands and Norway; Norway data is gross weight of ore.
[7] Gross weight of ore for January through September only.
[8] Metal content of ore for January through September only.

Source: Monthly Bulletin of the International Lead and Zinc Study Group. Lead and Zinc Statistics, v. 13, No. 4, April 1973, p. 25; v. 14, No. 4, April 1974, p. 25.

Table 57.—Major world trade in refined zinc

(Thousand metric tons)

Destination	Exporting region								
	North America	Latin America [1]	Western Europe [2]	Eastern Europe [3]	Africa	Asia	Oceania	Origin not reported by continent	Total [4]
1972									
United States	246.0	35.4	97.7	8.8	21.2	27.3	35.9	1.7	474.1
Western Europe:									
Belgium-Luxembourg [5]	1.8	--	1.3	5.2	10.7	6.7	1.9	5.6	33.2
France	.8	--	22.7	9.1	1.0	16.7	--	.5	50.8
Germany, West	5.6	--	113.5	6.6	6.3	1.1	--	--	133.1
Italy [6]	3.1	--	18.1	2.5	6.6	--	1.0	--	33.7
Netherlands	--	--	10.4	3.2	2.0	3.0	--	.3	18.9
Sweden	1.0	--	32.9	4.9	--	--	--	--	38.8
Switzerland	--	--	26.9	1.4	1.8	2.7	--	--	32.8
United Kingdom	67.5	.6	67.1	25.7	10.6	.5	41.1	11.5	224.7
Other [7]	.2	--	14.4	3.5	1.6	--	--	--	19.7
Total	80.0	.6	307.3	62.1	40.6	30.7	44.0	17.9	585.7
Japan	--	.2	--	--	--	7.2	--	--	7.4
Grand total	326.0	36.2	405.0	70.9	61.8	65.2	79.9	19.6	1,067.2
1973									
United States	312.7	19.2	83.0	15.2	25.8	38.7	38.2	1.2	534.0
Western Europe:									
Denmark	.3	--	11.4	.1	.8	--	--	--	12.6
France	1.3	--	39.9	8.5	--	7.6	--	.8	58.1
Germany, West	2.1	--	97.6	4.4	1.2	1.2	.1	--	106.6
Netherlands	1.2	--	17.9	2.5	--	5.3	--	--	26.9
Sweden	.5	--	37.2	3.1	--	--	--	--	40.8
Switzerland	--	--	19.5	2.2	3.4	3.4	--	--	28.5
United Kingdom	59.8	.3	92.4	27.6	2.3	.9	34.7	1.7	219.7
Total	65.2	.3	315.9	48.4	7.7	18.4	34.8	2.5	493.2
Japan	4.6	.4	2.1	3.1	--	16.3	.5	--	27.0
Grand total	382.5	19.9	401.0	66.7	33.5	73.4	73.5	3.7	1,054.2

[1] Includes Mexico.
[2] Includes Yugoslavia.
[3] Includes Bulgaria, East Germany, Poland, and the U.S.S.R.
[4] Reported totals.
[5] January through November.
[6] January through September.
[7] Includes Austria, Denmark, and Finland.

Source: Monthly Bulletin of the International Lead and Zinc Study Group. Lead and Zince Statistics, v. 13, No. 5, May 1973, pp. 26–27, v. 14, No. 5, May 1974, p. 25.

Table 58.—World movement of solid fuels in 1971 and 1972 [1]

(Thousand metric tons, standard coal equivalent)

Source area	Destination										
	Market economy countries								Centrally planned economy countries [7]	Destination unspecified [8]	World [9]
	North America [2]	Caribbean America [3]	Other America [4]	Western Europe [5]	Africa	Near East	Far East	Oceania [6]			
1971											
Market economy countries:											
North America [2]	16,965	450	2,570	15,705	45	--	24,725	5	115	10	60,590
Western Europe [5]	150	25	65	31,620	r 335	--	45	--	660	40	32,950
Africa	15	--	--	925	905	--	220	15	--	430	2,505
Far East	--	r 105	20	--	--	--	740	--	--	5	875
Oceania [6]	--	5	45	3,165	--	--	16,670	345	30	5	20,275
Centrally planned economy countries [7]	--	125	145	25,950	660	--	4,870	--	40,020	120	71,890
Total [9]	17,130	r 710	2,845	77,365	r 1,945	--	47,270	365	40,825	610	189,085
1972											
Market economy countries:											
North America [2]	17,755	580	2,545	15,810	--	--	23,990	--	65	5	60,750
Western Europe [5]	145	50	145	29,940	245	--	10	--	855	60	31,490
Africa	10	--	--	795	660	--	110	--	--	300	1,880
Far East	--	145	145	--	--	--	495	10	--	5	800
Oceania [6]	--	40	35	3,160	--	--	20,285	115	--	5	23,640
Centrally planned economy countries [7]	--	105	225	27,210	690	--	4,065	--	40,230	350	72,880
Total [9]	17,910	920	3,095	76,915	1,595	--	48,955	125	41,150	725	191,440

r Revised.

[1] Data based on the general trade system; lignite and lignite briquets and coke are reduced to standard coal equivalent (SCE) before inclusion; bunker loadings are excluded.

[2] Bermuda, Canada, Greenland, St. Pierre, and the United States.

[3] Mexico, all areas of Central America, all islands of the Caribbean, Columbia, and Venezuela.

[4] All South America except Columbia and Venezuela.

[5] All market economy nations of Europe, and includes Yugoslavia.

[6] Refers entirely to Australia.

[7] The centrally planned nations of Europe and Asia.

[8] As reported in source.

[9] Totals reported in source; detail does not add to listed totals as shown due to (1) inclusion of quantities shipped to or received from areas not listed separately or not identified in original sources and/or rounding.

Source: United Nations. World Energy Supplies 1969–72. Statistical Papers, Series J, No. 17, New York, 1974, pp. 41–47.

Table 59.—World movement of crude petroleum in 1971 and 1972 [1]

(Thousand metric tons)

Source area [2]	Destination										
	Market economy countries								Centrally planned economies Europe	Destination unspecified	World
	North America	Caribbean America	Other America	Western Europe	Africa	Near East	Far East	Oceania			
1971											
Market economy countries:											
North America	36,590	20	--	20	--	--	20	--	--	--	36,650
Carribean America	38,300	61,890	6,590	20,600	30	--	460	--	--	--	127,870
Other America	140	750	1,000	110	--	--	--	--	--	--	2,000
Western Europe	--	--	--	2,060	10	--	--	--	--	--	2,070
Africa	13,120	24,400	5,650	203,250	3,750	730	3,470	80	4,400	--	258,850
Near East	26,210	12,480	14,350	367,250	20,200	22,300	224,040	12,110	4,610	13,230	716,780
Far East	5,600	1,030	--	100	--	--	38,390	1,270	--	--	46,390
Oceania	400	--	--	70	--	--	230	--	--	--	700
Centrally planned economies Europe	--	4,760	--	26,950	2,270	--	1,500	--	38,950	730	75,160
Total	120,360	105,330	27,590	620,410	26,260	23,030	268,110	13,460	47,960	13,960	1,266,470
1972											
Market economy countries:											
North America	45,950	--	--	--	--	--	30	--	--	--	45,980
Caribbean America	34,570	59,830	4,880	17,080	--	--	440	--	--	--	116,800
Other America	1,080	3,050	1,870	90	--	--	50	--	--	--	6,140
Western Europe	60	--	--	4,960	20	--	30	--	--	--	5,070
Africa	30,240	22,030	4,300	188,770	2,880	580	5,240	--	5,740	--	259,780
Near East	33,620	23,730	21,810	420,580	21,100	22,920	246,520	12,550	11,220	--	814,050
Far East	8,170	2,860	--	1,080	--	--	41,690	710	--	--	54,510
Oceania	40	--	--	340	--	--	170	--	--	--	550
Centrally planned economies Europe	40	5,260	--	23,810	2,330	--	360	--	45,190	--	76,990
Total	153,770	116,760	32,860	656,710	26,330	23,500	294,530	13,260	62,150	--	1,379,870

[1] Data are based on general trade system.

[2] For details on countries included in each area, see footnotes to table 58.

Source: United Nations. World Energy Supplies 1969–72. Statistical Papers, Series J. No. 17, New York, 1974, pp. 58–67.

Table 60.—Refined petroleum fuel trade in 1971 and 1972, by Continental Area [1]

(Million metric tons)

Continental area [2]	Exports		Imports		Bunkers	
	1971	1972	1971	1972	1971	1972
Market economy countries:						
North America	8.01	9.08	116.10	128.10	17.12	16.48
Caribbean America	129.26	123.05	15.39	15.27	15.67	13.72
Other America	.70	1.36	4.27	3.03	1.76	1.70
Western Europe	97.19	105.56	122.63	129.36	48.41	51.76
Africa	4.84	5.76	13.32	12.44	8.09	7.75
Near East	56.91	54.30	3.31	3.17	24.89	23.97
Far East	24.52	29.73	48.45	44.74	27.57	29.77
Oceania	2.36	2.16	5.55	6.31	3.97	4.43
Centrally planned economy countries:						
Centrally planned Asia	NA	.21	1.29	1.42	NA	NA
Centrally planned Europe	37.70	40.23	6.63	6.31	NA	NA
Total [3]	361.49	371.44	336.93	350.15	147.52	149.63

NA Not available.

[1] Figures given are for fuel commodities only, excluding lubricants and other refinery products not normally used as energy sources. Apparent discrepancies between export, import, and bunker totals evidently result from quantities of material en route at yearend, from incomplete data, and from differing from country to country in the method of reporting bunkering materials.

[2] Continental areas are the same as those used in table 58 except that Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Romania, and the U.S.S.R. are reported under the group term "Centrally planned Europe," while the People's Republic of China, North Korea, Mongolia, and North Vietnam are reported under the group term "Centrally planned Asia."

[3] Reported totals; may differ from sum of detail due to rounding.

Source: United Nations. World Energy Supplies 1969–72. Statistical Papers, Series J, No. 17, New York, 1974, pp. 77–88.