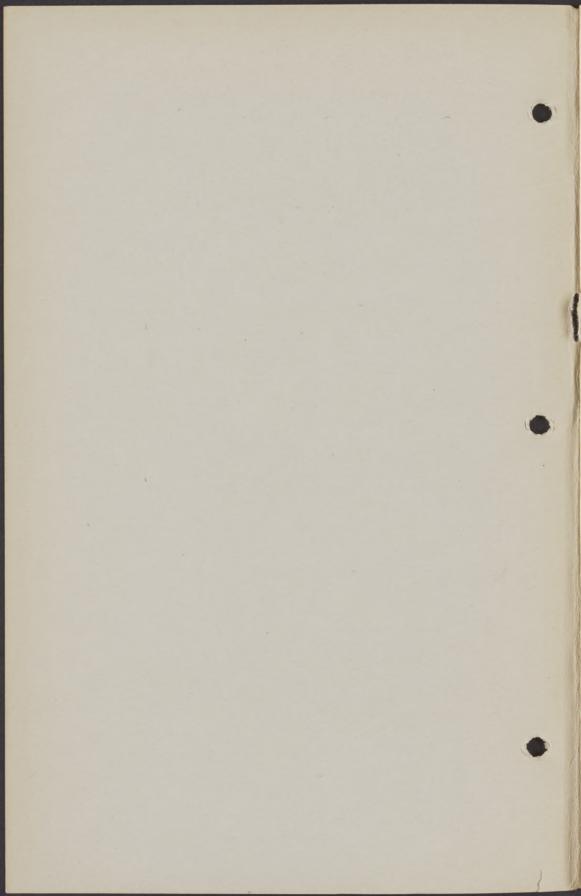
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REPORT TO CONGRESS ON LEND-LEASE OPERATIONS

For the Period Ended April 30, 1943

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REPORT TO CONGRESS ON LEND-LEASE OPERATIONS

For the Period Ended April 30, 1943

"The President from time to time, but not less frequently than once every ninety days, shall transmit to the Congress a report of operations under this Act except such information as he deems incompatible with the public interest to disclose."

[From Section 5, subsection b of "An Act to Promote the Defense of the United States" (Public Law No. 11, 77th Congress, 1st Session).]

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PRESIDENT'S LETTER OF TRANSMITTAL

To the Congress of the United States of America:

As I transmit to the 78th Congress a Report of Operations under the Lend-Lease Act from March 11, 1943 to April 30, 1943, the last members of the once vaunted Afrika Korps and their Italian allies are streaming into prison camps. The peoples of Tunis and Bizerte are hailing their liberation—and Italians among them are as enthusiastic as any for their deliverance.

An entire continent—the continent of Africa—has now been cleared of the enemy. Its people have been freed from Nazi and Fascist rule. In Africa we have dealt a blow which is sorely felt in Berlin and Rome and Tokyo; and we have brought hope to millions still to be liberated. Liberation of Africa is a forerunner of the future.

In the coming battles for Germany and Japan, we shall need the full support and the full resources of the peoples of the newly liberated areas. This is a military and political necessity of the first order. Their fields can produce food not only for their own people, but for the United Nations' forces. Their factories and mines can supply not only themselves, but our armies as well.

The peoples in liberated areas are enlisting in support of the United Nations' cause. Their support will reflect itself in active cooperation at the proper time by millions still to be liberated. They appreciate, as only those who lost freedom can appreciate, the compelling necessity for overthrowing tyranny.

Our lend-lease operations in North and West Africa—the first of the liberated areas—have demonstrated how a freed people can aid in the defeat of the Axis. In this victory, our military operations have been backed up by the friendly support of the peoples behind the lines. We also were aided by the new French armies. They were equipped with lend-lease weapons. They were and are an important part of the United Nations' fighting forces. Aid has also been given us and the other United Nations by the liberated peoples of French Africa in the production and shipment of strategic and critical materials for our war production program.

As we progress to victory, the United Nations have brought and are bringing food for the starving and medicine for the sick in the areas which we set free. Our promises are being fulfilled in deeds. Our integrity is enlisting the peoples and resources of these areas as effective fighting partners in the common fight

against Axis aggression and tyranny.

While Axis prisoners have streamed into captivity at the end of our campaign of liberation in North Africa, lend-lease has shipped greater and greater quantities of war matériel into the battle areas—and into the other countries allied with us.

In my lend-lease report to the Congress on September 11, 1941, I stated that "it is our task to turn the workshops of our industry into mighty forges of war—to out-build the aggressors in every category of modern arms."

Today, we are out-building the aggressors in every category of modern arms. And we are delivering them in the amounts necessary to build up the striking power for offensives that will end only in Berlin and Tokyo.

As lend-lease moves ahead in its third year, our armed forces, our supplies, and the combined efforts of the United Nations are driving ahead to complete victory over the enemy.

Franklin D. Roosevelt.

THE WHITE HOUSE May 25, 1943.

Chapter 1

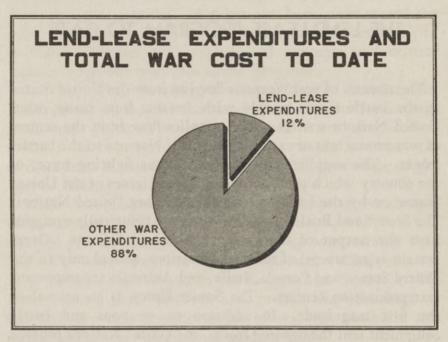
THE LEND-LEASE PROGRAM TO DATE

The streams of war weapons flowing from the United States to the battle fronts mingle with streams from many other United Nations sources. War supplies flow from the centers of war production of each of the United Nations to the battlefronts. The supplies may be used by the fighting forces of the country which produces them, by the forces of the United States, or by the forces of one of the other United Nations. The Soviet and British fighting forces are principally equipped from the output of their own factories and farms. Great Britain is an arsenal of finished munitions, second only to the United States, and Canada, India, and Australia are important war production centers. The Soviet Union is an arsenal of the first magnitude. In addition to weapons and battle equipment sent the fighting fronts, the United Nations provide great quantities of the essential raw materials, such as copper, nickel and tin, mica and tungsten, wool and rope fiber for the production of war supplies in the United Nations arsenals.

Lend-lease supplies from the United States fill critical deficiencies. They are sent in order to attain the maximum possible United Nations production of the tools of war, and to bring the greatest possible weight of men and materials to bear against the Axis, in accordance with the time table and geography of United Nations strategy. That strategy is to win unconditional surrender and to win it as quickly as possible—in Rome and Berlin and Tokyo.

Total Aid

Lend-lease aid furnished by the United States from March 11, 1941, to April 30, 1943, totalled \$11,102,000,000. Of this amount \$9,214,000,000 represents the value of goods transferred to our allies and \$1,888,000,000, the value of services rendered. Lend-lease expenditures have been approximately 12 percent of our total war spending to date.



Munitions have been 46 percent of total lend-lease aid; industrial materials and equipment for our allies' war production 22 percent; agricultural products 15 percent; and shipping and other services 17 percent.

The dollar value of lend-lease aid in March 1943 was \$688,000,000 and in April was \$783,000,000. Table 1 shows the dollar value of lend-lease transfers and services.

Lend-Lease Exports

Most lend-lease goods transferred to foreign governments have been sent overseas to the fighting fronts. The dollar value of lend-lease exports from March 11, 1941, to April 1,

TOTAL LEND-LEASE AID

Thousands of Dollars

DIA BEABLE	April 1943	March 1943	Cumulative Mar. 1941 through Apr. 1943
Goods Transferred	\$720,103	\$663,275	\$9,214,238
Services Rendered	62,851	24,450	1,888,234
Total Lend-Lease Aid	782,954	687,725	11,102,472

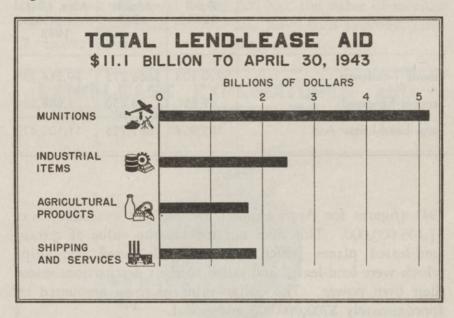
Table 1

1943 (figures for April exports are not yet available) was \$7,105,000,000. This does not include the value of certain lend-leased planes which were flight-delivered and ships which were lend-leased and sailed to their destinations under their own power. The dollar value of these amounted to approximately \$700,000,000 additional.

The difference between the dollar value of lend-lease transfers and lend-lease exports is due principally to (1) goods transferred to lend-lease countries and used in the United States, such as trainer planes used in the training in this country of pilots of other United Nations, and (2) goods which have been transferred, but not yet exported.

The total of goods transferred and services rendered is the best measure of the over-all amount of lend-lease aid. However, in view of the global nature of the war, the name of the government to which goods are transferred does not necessarily indicate the battle front on which the goods will be used; for example, guns transferred to the United Kingdom may be used by New Zealand troops fighting in North Africa. Hence in considering aid by countries, the export figures give a better picture of the part played by lend-lease in the various fronts of the war than do the figures on transfers.

Table 2 shows the monthly totals of lend-lease exports by country. Exports in March reached a new high, totalling \$712,000,000, more than twice as much as in the corresponding month a year ago and 20 percent more than in the previous high month.



As shown in Table 3, nearly half of all lend-lease exports have been munitions. We have sent over a billion dollars' worth of guns and ammunition and bombs. We have sent many thousands of planes, including nearly \$900,000,000 worth sent aboard ship and many others flown direct by air. We have sent over \$600,000,000 of military motor vehicles, and over \$500,000,000 of tanks.

For the arsenals of the other United Nations we have sent more than \$1,950,000,000 of machinery and tools, steel, armor plate, aluminum, copper, chemicals, and other materials for use in making more guns, planes, tanks, and ships with which to fight our common enemies.

We have shipped more than \$1,600,000,000 worth of agricultural products. Most of this has been food shipped principally to Russia, for the Soviet Army, and to Great Britain, for the British armed forces and those on the production front

LEND-LEASE EXPORTS—MONTHLY

Millions of Dollars

	United Kingdom	U. S. S. R.	Africa and Middle East	China, India, Aus- tralia, New Zealand	Other	Total
1941 Mar Apr May Jun	1 9 26		1 5 6	1 1	1 4 1 2	1 6 16 35
Jul	49 46 74 141 107 119	1	19 14 7 12 11 21	1 5 2 12 18 12	3 2 2 1 2	72 67 85 166 139 154
1942 Jan	103 78 138 128 134 183	15 55 96 160 70 109	24 26 25 45 37 35	19 21 46 55 46 35	13 12 7 15 7	174 192 312 403 294 374
Jul	155 146 208 218 181 195	103 148 96 113 185 164	62 55 69 97 90 110	57 56 67 83 55 97	20 17 13 26 13 20	397 422 453 537 524 586
1943 Jan Feb Mar	174 205 298	153 167 187	90 35 104	72 48 66	15 25 57	504 480 712
TOTAL EXPORTS	3,116	1,822	1,000	875	292	7,105

Table 2

LEND-LEASE EXPORTS—CUMULATIVE—MARCH 1941 THROUGH MARCH 31, 1943

Millions of Dollars

	United King-dom	U. S. S. R.	Africa and Middle East	China, India, Australia, New Zealand	Other	Total
MUNITIONS Ordnance	148 265 199 104 94 71	60 220 327 180 229 25	93 186 135 133 148 15	78 145 139 117 113 7	36 42 87 19 23 14	415 858 887 553 607 132
Total	881	1,041	710	599	221	3,452
INDUSTRIAL ITEMS						
Machinery	191 334 261 185	122 235 11 97	61 94 35 56	50 104 43 42	6 12 5 27	430 779 355 407
Total	971	465	246	239	50	1,971
AGRICULTURAL PRODUCTS						
FoodstuffsOther		283	40 4	24 13	19	1,399
Total	1,264	316	44	37	21	1,682
TOTAL EXPORTS	3,116	1,822	1,000	875	292	7,105

The above data do not include the value of certain lend-leased planes, which were flight-delivered, and ships, which were lend-leased and sailed to their destinations under their own power.

Table 3

who are supplying the fighting lines. We have also sent food for the people of Algeria and Morocco and now for Tunisia. Lend-lease food is going into the liberated areas in the wake of advancing United Nations forces as an essential element of military operations and in fulfillment of the President's statement of our policy that "No one will go hungry or without

the means of livelihood in any territory occupied by the United Nations, if it is humanly within our power to make the necessary supplies available to them."



Lend-Lease by Our Allies

The program of lend-lease aid by the United States is being matched by other United Nations to the extent of their available resources, in aid which they render to each other and by lend-lease aid in reverse which they render to the United States without payment by us.

Although no over-all estimated dollar total for such aid is yet available, the following partial figures indicate the magnitude of mutual aid by our allies and their reverse lend-lease aid to us:

(1) The Chancellor of the Exchequer has estimated that up to the first of this year Great Britain had sent to the Soviet Union on a lend-lease basis munitions costing \$680,000,000. These included 3,000 tanks and 2,500 aircraft. In addition the British have provided shipping and convoy services on the Arctic route to Russia, have sent hundreds of thousands of tons of other supplies to the Soviet and have provided much of the equipment for the forces of the governments in exile.

- (2) From June 1, 1942 to April 1 of this year the United Kingdom provided as reverse lend-lease a large quantity of equipment and supplies needed by the American forces stationed there, totalling more than 1,360,000 ship tons. This is exclusive of construction materials used in building installations for American forces which totalled an additional 2,170,000 tons. The United Kingdom government has estimated that the cost of construction of airfields, barracks and other facilities for our forces in the United Kingdom will exceed \$600,000,000. These figures do not include large quantities of supplies provided by the British as reverse lend-lease to American forces in North Africa, India, Egypt, Iran, Iraq, Palestine, Iceland, and many other parts of the world. Nor do they include the value of many services, such as the transportation of American forces. A large proportion of American troops are carried in British ships as reverse lend-lease without payment by us, and a majority of the ships on the convoys to North Africa have been British.
- (3) Canada has provided without payment \$1,000,000,000 worth of military supplies for the fighting forces of the United Kingdom, Russia, Australia, and New Zealand and is now launching a mutual-aid program for a second billion dollars' worth. In proportion to population, a billion dollars' worth of aid from Canada is the equivalent of \$12,000,000,000 of aid from the United States.
- (4) The Australian government has estimated that its expenditures for reverse lend-lease to United States forces in the South and Southwest Pacific theaters will total \$196,000,000 by the end of the current fiscal year, June 30, 1943. This is 10 percent of Australia's total war budget for the period. Last year Australia provided most of the food for our forces there, and this year the Australian reverse lend-lease program calls for many times the amount supplied last year. The New Zealand government has estimated the cost of reciprocal aid to United States forces at \$31,825,000 up to February 28, 1943, and the estimate for the fiscal year ending March 31, 1944, is \$65,000,000.

Australia has a population of only 7,000,000 and New Zealand of only 1,650,000 persons. In proportion to popu-

lation their assistance to us represents a much greater share of their war effort than does our assistance to them.

Our forces are also receiving reciprocal aid from the Soviet Union, China, the Union of South Africa, India, and others of the United Nations to the extent that our needs can be supplied by these nations.

Chapter 2

LEND-LEASE IN THE THEATERS OF WAR

As the United Nations move forward against the Axis Powers with ever-growing strength, material aid by us and by our allies plays an increasingly vital role in the united strategy of war supply. American soldiers on foreign soil are equipped, fed, clothed, and supplied to a significant extent with the growing quantities of reverse lend-lease aid we are receiving from our allies. Arms, food, industrial materials, and other war supplies flow from the United States and other United Nations to those fronts from which the most damaging blows can be struck at our common enemies.

AFRICA AND MIDDLE EAST

In Africa we have dealt the Axis a blow which will lead to further blows that will prove mortal.

Lend-lease shipments to Africa and the Middle East, not including certain lend-lease planes flown away and lend-lease ships sailed away, totalled \$1,000,000,000 from March 11, 1941, to April 1, 1943. Cash purchase shipments to this area totalled an additional \$635,000,000 during the period.

One-sixth of lend-lease shipments to Africa and the Middle East were sent in the first 12 months of lend-lease and five-sixths in the past 12 months. The following table shows the break-down of lend-lease exports to the area by categories for the periods ending April 1, 1942, and April 1, 1943.

Item	March 11, 1941, to April 1, 1942	April 1, 1942, to April 1, 1943
Ordnance Aircraft Tanks Motor Vehicles Watercraft Industrial Products Agricultural Products	\$44,532,000 5,583,000 41,112,000 29,030,000 6,138,000 36,968,000 6,383,000	\$234,138,000 129,842,000 92,431,000 118,614,000 8,268,000 209,612,000 37,130,000
TOTAL	169,746,000	830,035,000

In the past six months alone lend-lease exports to Africa and the Middle East totalled \$525,000,000, mostly munitions. In addition some lend-lease equipment supplied by the United States and used by the British First Army was sent on from the United Kingdom. Thousands of lend-lease planes and tens of thousands of lend-lease trucks with the British First and Eighth Armies have played an important part in the smashing defeat of Von Arnim's forces in Tunisia. The French forces under General Giraud and the Fighting French under General LeClerc have been largely equipped through lend-lease.

The British have provided our forces with many essential supplies and services ranging from Spitfires for some of our fighter squadrons to medical supplies and most of the coal for the operation of railroads bringing troops and equipment up to the front. Most of the British troops have fought with British equipment and most of the American troops with American equipment, but both have been strengthened by equipment furnished by the other and aided by the very effective participation of French forces in the final offensive, fighting with lend-lease weapons supplied from the United States.

Civilian Supply in Liberated Areas

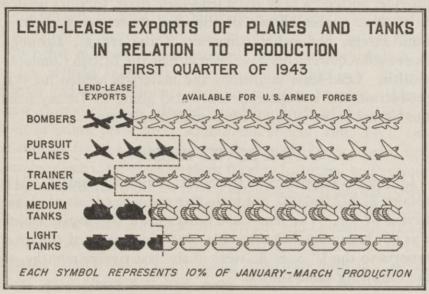
Since the invasion last November, lend-lease has had a double job. In addition to the military equipment we have

sent to the United Nations forces there, we have supplied food, clothing, medicines, and other necessities of life for the civilian population behind the lines. These had a value of \$32,205,000 up to April 1 and have been essential to the success of our military operations. Lend-Lease food and medicines are now being distributed to the people of war-torn Tunisia. The British have also sent large quantities of such supplies. We have also sent materials and equipment to aid in restoring the

production of strategic and critical raw materials.

Even though the grasp of the Axis on North Africa has now been broken, lend-lease supplies to that area are of continuing importance to the United Nations war effort. We must continue to supply munitions and war equipment to the armies of our French allies in North Africa so that they may be properly trained and equipped to play their part in the invasions to come. We must continue, moreover, to supply the essential civilian needs of North Africa as a military and political necessity. The area is capable of producing large amounts of foodstuffs for the armies of the United Nations fighting in the European theater-foodstuffs which in 1941 provided more than 300,000 tons of fruits and vegetables, 200,000 tons of cereals and other large quantities of food for Vichy France and the Nazis. Before the liberation of North Africa, large amounts of phosphates for fertilizer (North Africa has the only large European source) and other materials vitally needed for farm and munitions production went to the Nazis. It can contribute such critical raw materials as manganese, cobalt, and phosphate to the war production of the United Nations. Cobalt is of particular importance to the United States as a steel alloy for the production of high-speed cutting tools used in the construction of aviation engines, in the manufacture of magnets and for the production of shells and naval armaments.

This area was so completely stripped by the Nazis of food and production equipment that we must send food and other essential civilian supplies until local production can be restored. When these immediate needs have been met, North Africa can produce food both for the inhabitants themselves and for export to the other United Nations as well as vital raw materials for export. Supplies sent now to North Africa will be repaid manyfold in terms of future United Nations supply from that area.



More planes and tanks were exported under lend-lease in the first quarter of 1943 than in the average quarter of 1942. However, the proportion of our total production that was exported was less than in 1942.

In the invasions to come, lend-lease supplies will have a two-fold task: to furnish aid to the invading forces of the United Nations, and to aid the peoples of the liberated areas. Lend-lease will continue to furnish greater and greater amounts of war supplies to the United Nations armies. Lend-lease supplies will also be needed to assist the people of newly liberated areas to help themselves and the United Nations through restoring the production of their farms, factories, and mines.

Middle East

To the Middle East lend-lease has sent industrial materials and equipment for assembly plants, repair depots, for building roads and railroads, pipe lines and gasoline refineries, airfields and other facilities needed for American and Allied forces and to aid in the transport of supplies to Russia by way of the Persian Gulf area.

Through the Middle East Supply Center we are helping to provide, both on a cash and a lend-lease basis, supplies needed to prevent a break-down of the civilian economy of Iraq, Iran, Egypt, and other countries of the region, although most such requirements have been met by the British Commonwealth. Lend-lease munitions and materials needed for war production and transportation are also going to Turkey from the United States along with British munitions.

THE SOVIET UNION

Lend-lease shipments to the Soviet Union to April 1, 1943, totaled \$1,822,000,000, not including many hundreds of planes ferried by air. The lend-lease program for the Soviet Union was not begun until October 1941 and nine-tenths of the total exports to the U. S. S. R. were in the last twelve months, as the following table shows:

ltem	October, 1941, to April 1, 1942	April 1, 1942, to April 1, 1943
Ordnance Aircraft Tanks Motor Vehicles Watercraft Industrial Products Agricultural Products	33,221,000 14,724,000	\$266,093,000 274,991,000 146,599,000 214,643,000 24,921,000 428,775,000 304,035,000
TOTAL	162,221,000	1,660,057,000

Lend-lease shipments to the Soviet Union up to April 1, 1943, totaled 3,500,000 gross tons. In terms of tonnage, shipments were more than one-third again as large in the first three months of 1943 as in the preceding three months, and more than twice the total shipped in the first three months of last year. In the last three months 30 percent of lend-lease

shipments to all areas went to the Soviet Union. We have sent more munitions to date to the Soviet than to the United Kingdom, although shipments to Russia did not start until many months after they began going to Great Britain.

Shipments to Russia of military equipment have included thousands of planes, many tens of thousands of trucks, jeeps, and other military motor vehicles, hundreds of thousands of miles of field telephone wire, several million pair of army boots, and large amounts of other military supplies. Lendlease shipments have also included hundreds of thousands of tons of armor plate, steel, aluminum, copper, zinc, TNT, and chemicals for the production in Russia of planes, tanks, and bombs; electric furnaces, presses, forging hammers, and various types of machine tools for Soviet arms factories; electric power generating equipment for Soviet war industries and quantities of rails and other supplies for railroads and communications.

American forces are not fighting or training on Russian soil but the Soviet Union is providing American ships in Russian ports with emergency fuel, food, medical aid, repairs, and other supplies as lend-lease in reverse.

Food for the Soviet Army.

More than 1,000,000 tons of food were shipped to Russia up to April 30. More than half of this was sent in the past six months and 40 percent of all Soviet shipments made in March were foodstuffs. Food this year has a shipping priority on a par with planes and trucks on the ships leaving for Russia.

These shipments are necessary in order to maintain the rations of the Soviet Army. The Nazis have held and ravished Russia's best agricultural region—the Ukraine—for two successive growing seasons. The consequent shortages of flour and sugar, of proteins and of fats, have become increasingly serious. The Soviet is making heroic efforts to restore food production in areas liberated from the Nazis and to raise more food in newly developed regions behind the Urals and far in the interior of Siberia. To aid these efforts, we have sent 10,000 tons of seeds.

EXPORTS END-LEASE FOOD PERCENTAGE OF OUR SUPPLY EXPORTED JANUARY - MARCH 1943 LEND-LEASE AVAILABLE FOR U.S. ARMED FORCES EXPORTS AND CIVILIANS 50505050505050505 ALL MEATS ALL MILK **PRODUCTS** BUTTER CHEESE EGGS FISH (FROZEN DODDDDDDD AND CANNED) CANNED FRUITS. **VEGETABLES** DRIED FRUITS DRIED BEANS RARRARI AND PEAS EACH SYMBOL REPRESENTS 10% OF SUPPLY

The food-supply data used in arriving at the above ratios represent one-fourth of the supply for the year 1942.

Principal food shipments have been of wheat and flour, sugar, canned meats, protein-rich dried peas and beans, lard and vegetable oils including margarine and small amounts of butter. Most of the lend-lease shipments of dehydrated vegetables go to the Soviet Union. Shipping food in this form saves vital shipping space on the long routes to Russia.

Aid by Britain.

Large quantities of military equipment have been sent to the Soviet Union by the United Kingdom, including many supplies produced in Canada. British shipments of planes and tanks have matched our own. The British have also sent hundreds of thousands of tons of other supplies to Russia, among them more than 50,000 tons of crude rubber.

The major part of the job of convoying supplies for Russia over the dangerous Arctic route has been borne by the British Navv and the R. A. F. On the southern or Persian Gulf route the British have aided us in developing transportation facilities through Iran. At the head of the Persian Gulf new docks and lighters, warehouses, assembly depots, and other facilities have enormously multiplied the capacity of once primitive and sleepy ports. Fighter planes and short-range bombers are unloaded, assembled, tested and flown straight to Russia from new airplane assembly plants. The Trans-Iranian railroad, now operated by the United States Army in the south and by the Red Army in the North and using American and British locomotives and freight cars, is carrying to the Russians each month many times the amount of supplies that could be sent over it a year ago. And thousands of American trucks are also taking supplies across Iran on roads that were caravan trails a few months back.

UNITED KINGDOM

Lend-lease shipments to the United Kingdom totalled \$3,116,000,000 from March 11, 1941, to April 1, 1943. Shipments of essential supplies to the United Kingdom that were purchased for cash totalled \$1,400,000,000 in the same period. In the last three months lend-lease shipments to the United Kingdom were 40 percent of lend-lease exports to all areas.

Of the lend-lease supplies sent to the United Kingdom onethird was shipped in the first year of lend-lease and two-thirds in the second year, as shown by the following table.

Item	March 11, 1941, to April 1, 1942	April 1, 1942, to April 1, 1943
Ordnance Aircraft Tanks Motor Vehicles Watercraft Industrial Products Agricultural Products	\$51,368,000 38,151,000 15,412,000 29,059,000 6,055,000 276,147,000 470,041,000	\$361,220,000 160,569,000 88,533,000 64,626,000 65,492,000 695,203,000 794,717,000
TOTAL	886,233,000	2,230,360,000

Bombs, guns, and ammunition make up more than half of lend-lease munitions sent to Britain. Although we have sent a substantial number of planes under lend-lease to the United Kingdom, a much greater quantity has gone to the Soviet Union. This is partly because British factories are producing such great quantities of four-engine bombers and fighters for the air offensive against Axis Europe and partly because the British have paid and are still paying in cash for large numbers of planes under contracts entered into prior to the passage of the Lend-Lease Act. The tanks and trucks which have gone to the British Isles represent less than one-fifth of lend-lease shipments of these articles.

Supplies for British Arsenals.

The most important categories of industrial supplies sent to Britain have been raw materials, machinery, tools, and other equipment for British munitions production together with petroleum for the RAF and the British Navy.

We have sent quantities of steel and chemicals and smaller amounts of other industrial materials for British production of bombers and the blockbuster bombs, which have been raining on German munitions and railroad centers, and for the building of tanks and transports and destroyers. Our shipments have supplemented much larger quantities of industrial

materials both domestically produced and imported from other parts of the British Commonwealth. The war output of British industry is indispensable to supplying United Nations forces.

The British have depended upon us for critical types of machine tools and other production equipment and we have been able to supply these needs, partly because of the early expansion of American machine tool production capacity stimulated by British cash orders placed in 1939 and 1940, before the Lend-Lease Act was passed.

Enormous quantities of gasoline and oil are consumed in the great RAF and American raids on Essen, Dusseldorf, Cologne, Duisburg and other centers of Nazi war production, and by British and allied naval units and convoys operating from the British Isles. Lend-lease shipments of petroleum products have been essential in continuing the air offensive in Europe, and in the continued battle against German submarines and air and surface raiders on the Atlantic.

Food Shipments

Lend-lease food shipments to the United Kingdom have made up a vital 10 percent of Britain's food supply. Without these shipments it would not have been possible to provide sufficient food to the British people to sustain their intensive war effort. Despite lend-lease food shipments, however, British per capita food consumption is generally below the level of our own. Lend-lease food shipments to the United Kingdom this year have been continuing at about the same level as last year.

Almost all lend-lease food is shipped either to the United Kingdom or to the Soviet Union and lend-lease food shipments to all areas last year were less than six percent of total United States supply. This year, because of increasing Russian shortages and the needs of liberated areas in Europe, lend-lease shipments are expected to increase. How much food we send will depend, of course, upon how much we produce, for the needs of United States armed forces and American civilians

must of course be met. Elsewhere in this report a chart shows the quantities of food shipped to all areas under lend-lease in relation to our supply.

Reverse Lend-Lease

American forces in the British Isles are receiving almost all the supplies and services that can be provided on the spot as reverse lend-lease, without payment by us. Such aid is furnished through local supply officers at hundreds of airfields, camps and bases throughout the British Isles. The following table shows the estimated quantities, in ship tons provided to the various services of the United States Army in the United Kingdom from June 1, 1942, to April 1, 1943.

Articles and Equipment:	In ship tons
Engineer Corps	. 249,471
Quartermaster Corps	
Signal Corps	
Ordnance Department	
Transportation Corps	
Medical Corps	
Air Force	
Miscellaneous Supplies	. 29,541
devision and appropriate that another angels	
Total	. 1,362,681

Construction materials totaled another 2,177,384 tons.

Literally thousands of different types of items have been provided—from barbed wire to kitchen ranges; from artillery and incendiary bombs to locomotives; from parachutes to telephone switchboards; from concrete mixers to Nissen huts; from Spitfires to soft drinks; from antitank mines to underwear and socks.

In addition to these supplies and to facilities turned over without charge to United States forces, the British have provided many services as reverse lend-lease, such as: Sea transport of United States Army personnel and freight, rail and motor transport within the United Kingdom.

Repair and servicing of American ships in British ports not only in the United Kingdom but elsewhere

in the Empire.

All official mail, telephone, and telegraph and other communications; light, heat, water, and other public utility services.

British civilian labor directly employed by United States forces and paid by the British varying in number from 12,000 to 25,000 each week.

Maintenance and servicing of Red Cross centers for United States forces.

All expenses for printing newspapers for the United States Army, in the European theatre.

All available British supplies for United States Army Commissary stores (canteens). (The United States Army sells these supplies for cash to American troops and retains the proceeds.)

The British also have provided American forces with considerable quantities of food from their own limited stocks and this year expect to furnish several hundred thousand additional pounds of food, principally the kinds that can be grown in quantity on British soil. The spirit in which this reverse lend-lease is provided is illustrated by the setting aside of much-needed farm land for the production of sweet corn for American troops. Corn is not generally eaten by the British people.

In the first 3 months of 1943 they furnished our forces with 16,251,000 pounds of enriched wheat flour, 5,435,000 pounds of potatoes, 4,920,000 pounds of bread, 7,274,000 pounds of sugar, and 3,500,000 pounds of vegetables as well as many other foodstuffs.

Quantities and statistics do not fully measure the value of reverse lend-lease aid. Recreational facilities including base-

WHERE LEND-LEASE PLANES AND TANKS HAVE GONE EACH SYMBOL REPRESENTS PLANES OR TANKS VALUED AT \$25,000,000 へんべんべんべんべんべん

The plane figures do not include the value of certain lend-leased planes which were flight delivered.

ball fields and equipment and musical instruments have been provided for our troops. The best hotels have been made available so that our forces can take their leave at the seashore. The value of these services to the morale and health of our troops is incalculable.

CHINA, INDIA, AUSTRALIA AND NEW ZEALAND

Total lend-lease exports to this area from March 11, 1941, to April 1, 1943, have been \$875,000,000. As shown by the following table about one-eighth of these shipments were made in the period ending April 1, 1942, and seven-eighths in the period ending April 1, 1943:

ltem	March 11, 1941 to April 1, 1942	April 1, 1942 to April 1, 1943
Ordnance	\$29,137,000 37,277,000 4,416,000 31,161,000 68,000 32,276,000 4,197,000	\$194,346,000 101,801,000 112,405,000 81,559,000 6,369,000 207,493,000 32,786,000
TOTAL	138,532,000	736,759,000

More than two-thirds of the supplies shipped to this area have been munitions for United Nations forces in India, China, and Burma and for Australian and New Zealand forces fighting beside the Americans in New Guinea, the Solomons and other parts of the Southwest and South Pacific theaters.

China

Of the lend-lease supplies shipped to China, some got in over the Burma Road before the Japanese cut that route, others have reached their destinations by other means and still others are stockpiled ready for delivery. These have included critical tools and raw materials to keep in operation Chinese arsenals, and spare parts to keep trucks rolling over the difficult but vital roads in the interior. New land routes are being developed to increase lend-lease shipments into China, and the reopening of the Burma Road is among the strategic objectives of our forces. For their part the Chinese are providing some of the equipment for the growing U. S. Air Forces in China as lend-lease in reverse.

India

Lend-lease munitions have been helping to build up the striking power of General Wavell's forces in India, although most of the equipment and supplies for these forces have been provided by the United Kingdom or from India's own substantial war production. Lend-lease machine tools, steel and other materials and equipment are aiding in increasing the Indian output of munitions, in building airfields, and speeding the flow of supplies through Indian ports and on Indian railroads.

American forces in India have received reverse lend-lease aid on a substantial scale. Accommodations of various types have been made available, in addition to the construction of airfields, hospitals and other facilities for our troops. We have received in India millions of gallons of aviation and truck gasoline, and great quantities of lubricating oil, together with utilities, services and items of uniform equipment adapted to tropical climates. We also have received small arms and ammunition, engineers' stores and other equipment for our troops under reverse lend-lease.

Australia and New Zealand

Australian armored units have fought through New Guinea jungles beside our troops, in tanks provided by the United States under lend-lease. In turn, most of the food needed by our forces has been provided by Australia and New Zealand under lend-lease in reverse. Severe civilian shortages of a number of foods have resulted in both countries but the reciprocal aid program has been maintained and is being greatly expanded this year.

Australia is manufacturing many items of uniform equipment for our forces and both Australia and New Zealand are expanding their canning and dehydrating facilities in order to provide more field rations for our troops. Lend-lease equipment from the United States is helping to make this possible. Australia is also producing some types of munitions for United States forces with the aid of lend-lease machinery and materials from the United States. Australia and New Zealand have provided our forces with airfields, warehouses, repair shops and barracks as reverse lend-lease. American planes, tanks, and ships are repaired in Australian and New Zealand shops and shipyards.

Rubber tire requirements of American forces are now largely being met by Australian factories on a reverse lend-lease basis. More than 320,000 items of recreational equipment covering everything from baseballs and bats to chess-sets and horse-shoes have been included in the reverse lend-lease program. A number of hospitals, including the newest and finest in Australia, have been turned over to the United States Army for its exclusive use.

New Zealand had spent \$22,000,000 up to February 28, 1943, on a continuing program of construction of hospitals, camps, warehouses and other capital projects for the use of American forces.

OTHER AREAS

Lend-lease shipments to other areas totaled \$292,000,000 up to April 1, 1943. This figure included supplies shipped to Canada totalling \$184,000,000. Canada does not receive lend-lease aid from the United States. She buys munitions and other supplies from us and we buy other types of munitions and materials from her for cash. However, some lend-lease supplies are exported to Canada for the use of other United Nations' forces in training there. We have, for example, sent more than 1,000 trainer planes to Canada for British R. A. F., Norwegian, Polish and other student pilot units. Other lend-lease exports to Canada consist of supplies sent for transshipment, principally partially fabricated mu-

nitions items on which production is completed in Canadian plants. The finished products are then sent on from Canada to the United Kingdom, Russia, the Middle East or the Far East, and thus do not appear in the records of United States exports to these areas.

The balance of lend-lease exports to areas other than the four major war zones have gone to Latin America, principally

Brazil, to Central America and the Caribbean area.

The following table shows the total of shipments to other areas by category:

ltems	March 11, 1941, to April 1, 1942	April 1, 1942, to April 1, 1943
Ordnance Aircraft Tanks Motor Vehicles Watercraft Industrial Products Agricultural Products	\$17,631,000 18,773,000 1,514,000 1,456,000 317,000 8,328,000 7,354,000	\$60,758,000 66,775,000 17,273,000 21,698,000 14,042,000 41,103,000 14,177,000
TOTAL	55,373,000	235,826,000

Chapter 3

SPECIAL ACTIVITIES

FOOD DEHYDRATION AND COMPRESSION

One of the most striking developments in the field of war supply has been the advancement in the art of dehydrating and compressing foods. Dehydration reduces weight by removing water; compression reduces bulk by removing air. The savings in shipping space which result from eliminating large overseas shipments of "cargoes of air and water" as part of every food shipment can do much to win the battle of transportation. The accompanying chart illustrates the savings of space which can be achieved by dehydration and compression of eggs.

HOW SHIPPING SPACE IS SAVED
BY DEHYDRATING AND COMPRESSING FOODSTUFFS

SHELL EGGS

VIV VIV VIV VIV VIV

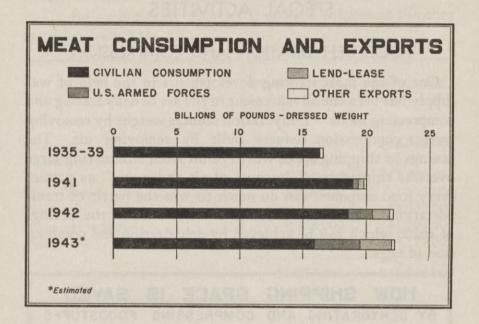
FROZEN EGGS

DEHYDRATED EGGS VIV VIV

ONE SHIPLOAD OF COMPRESSED DEHYDRATED EGGS IS THE EQUIVALENT OF 111/2 SHIPLOADS OF SHELL EGGS

OF SHELL EGGS

Of the two processes, dehydration was the first to be utilized extensively. During the past six or eight months, various branches of the Government have increasingly turned their attention to food compression and since March the work of all the various agencies has been unified and coordinated and a comprehensive plan developed to improve the compression process and widen its use.



Large quantities of dried eggs and dried milk and smaller quantities of other dehydrated foods have already been shipped under lend-lease. Through March 31 of this year 216,000 tons of dehydrated food had been shipped overseas. Early in April lend-lease made an experimental shipment of compressed dehydrated eggs which represented additional savings in shipping space.

The lend-lease program for the coming year contemplates sending overseas several hundred thousand tons of dehydrated and compressed foods. Application of dehydration and compression to other foods, such as fruit juice, meats, fish, vegetables, and other foods of high nutritive value, is fast reaching the stage where sizeable overseas shipments can be expected.

As a factor in combatting the battle of shipping, food dehydration and compression have great promise. The same number of ship arrivals overseas will mean larger food deliveries. But the advantages of the processes do not end there. Reduction in the bulk and weight of food shipments means savings of critical materials in packing. It means savings in truck, rail, and storage space.

Equally important, the processes substantially reduce perishability of food and will therefore add much needed flexibility to the food supply program. Storage will be facilitated. The time and distance factors in food delivery will be minimized. The lives and health of United Nations fighting forces will benefit, both from the standpoint of improvement in preservation of their food supply and from the standpoint of relief on their overtaxed systems of military transport.

In all its stages, lend-lease has given full support to the dehydration and compression program, both through contribution of ideas and through provision of funds to develop facilities. Orders to fill lend-lease requirements have lent considerable impetus to the expansion of facilities by the processors. Recently, lend-lease has made arrangements with the War Department which should encourage private financing of dehydration and compression facilities.

INTERCHANGE OF INVENTIONS

Under the Lend-Lease Act and supplemental international mutual-aid agreements, the United States has encouraged the complete interchange for war use of inventions, industrial processes, and technical information. The weight of our industrial ingenuity has been thrown into the United Nations' pool of war production. The Axis can be crushed only by cooperation of the United Nations on all fronts. Scientific 'know how' is one of the most important factors in defeating the Axis, and that knowledge must be shared if we are to achieve early victory.

Great Britian, since the fall of 1940, has afforded the United States royalty-free use in our war production of many important military and industrial inventions, and has given us much needed technical information. Early British battle experience thus conveyed to this country at a time when we were taking our first steps toward total preparedness and were relatively inexperienced in the ways of modern war, has contributed immeasurably to the effectiveness of the tanks, airplanes, and other weapons which we now produce. Similarly, the U. S. S. R. has furnished us valuable technical military information. We are also receiving the benefits of its research in synthetic rubber manufacture and the extraction of rubber from rubber-bearing plants at a time when military

reverses have cut off our supply of crude rubber.

The procedure for interchange of inventions under lendlease and reverse lend-lease between this country and Great Britain was formalized on August 24, 1942. Pursuant to the agreement and with full protection to its citizens, each government procures from its nationals at its own expense and makes available to the other government for war purposes patented and unpatented inventions, processes and information requested by the other government. Centralization in the two governments of these functions of making requests for procuring and interchanging patent rights and technical information has been of great practical value in saving time and making possible a well-coordinated technical program. The development of procedures and policies for further facilitating interchange under the agreement is the responsibility of a Joint Committee which meets in Washington and makes recommendations concerning problems which arise in the administration of the agreement.

APPENDICES

Appendix I LEND-LEASE ACT

Further to promote the defense of the United States, and for other pur-

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as "An Act to Promote the Defense of the United States."

Section 2.

As used in this Act-

(a) The term "defense article" means-

(1) Any weapon, munition, aircraft, vessel, or boat;

(2) Any machinery, facility, tool, material, or supply necessary for the manufacture, production, processing, repair, servicing, or operation of any article described in this subsection;

(3) Any component material or part of or equipment for any article

described in this subsection;

(4) Any agricultural, industrial or other commodity or article for defense.

Such term "defense article" includes any article described in this subsection manufactured or procured pursuant to section 3, or to which the United States or any foreign government has or hereafter acquires title, possession, or control.

(b) The term "defense information" means any plan, specification, design, prototype, or information pertaining to any defense article.

Section 3.

- (a) Notwithstanding the provisions of any other law, the President may, from time to time, when he deems it in the interest of national defense, authorize the Secretary of War, the Secretary of the Navy, or the head of any other department or agency of the Government—
 - (1) To manufacture in arsenals, factories, and shipyards under their jurisdiction, or otherwise procure, to the extent to which funds are

made available therefor, or contracts are authorized from time to time by the Congress, or both, any defense article for the government of any country whose defense the President deems vital to the defense of the United States.

(2) To sell, transfer title to, exchange, lease, lend, or otherwise dispose of, to any such government any defense article, but no defense article not manufactured or procured under paragraph (1) shall in any way be disposed of under this paragraph, except after consultation with the Chief of Staff of the Army or the Chief of Naval Operations of the Navy, or both. The value of defense articles disposed of in any way under authority of this paragraph, and procured from funds heretofore appropriated, shall not exceed \$1,300,000,000. The value of such defense articles shall be determined by the head of the department or agency concerned or such other department, agency, or officer as shall be designated in the manner provided in the rules and regulations issued hereunder. Defense articles procured from funds hereafter appropriated to any department or agency of the Government, other than from funds authorized to be appropriated under this Act, shall not be disposed of in any way under authority of this paragraph except to the extent hereafter authorized by the Congress in the Acts appropriating such funds or otherwise.

(3) To test, inspect, prove, repair, outfit, recondition, or otherwise to place in good working order, to the extent to which funds are made available therefor, or contracts are authorized from time to time by the Congress or both, any defense article for any such government, or to procure any or all such services by private contract.

(4) To communicate to any such government any defense information, pertaining to any defense article furnished to such government

under paragraph (2) of this subsection.

(5) To release for export any defense article disposed of in any way under this subsection to any such government.

(b) The terms and conditions upon which any such foreign government receives any aid authorized under subsection (a) shall be those which the President deems satisfactory, and the benefit to the United States may be payment or repayment in kind or property, or any other direct or indirect

benefit which the President deems satisfactory.

(c) After June 30, 1943, or after the passage of a concurrent resolution by the two Houses before June 30, 1943, which declares that the powers conferred by or pursuant to subsection (a) are no longer necessary to promote the defense of the United States, neither the President nor the head of any department or agency shall exercise any of the powers conferred by or pursuant to subsection (a); except that until July 1, 1946, any of such powers may be exercised to the extent necessary to carry out a contract or agreement with such a foreign government made before July 1, 1943, or before the passage of such concurrent resolution, whichever is the earlier.

(d) Nothing in this Act shall be construed to authorize or to permit the authorization of convoying vessels by naval vessels of the United States.

(e) Nothing in this Act shall be construed to authorize or to permit the authorization of the entry of any American vessel into a combat area in violation of section 3 of the Neutrality Act of 1939.

Section 4.

All contracts or agreements made for the disposition of any defense article or defense information pursuant to section 3 shall contain a clause by which the foreign government undertakes that it will not, without the consent of the President, transfer title to or possession of such defense article or defense information by gift, sale, or otherwise, or permit its use by anyone not an officer, employee, or agent of such foreign government.

Section 5.

(a) The Secretary of War, the Secretary of the Navy, or the head of any other department or agency of the Government involved shall, when any such defense article or defense information is exported, immediately inform the department or agency designated by the President to administer section 6 of the Act of July 2, 1940 (54 Stat. 714), of the quantities, character, value, terms of disposition, and destination of the article and information so exported.

(b) The President from time to time, but not less frequently than once every ninety days, shall transmit to the Congress a report of operations under this Act except such information as he deems incompatible with the public interest to disclose. Reports provided for under this subsection shall be transmitted to the Secretary of the Senate or the Clerk of the House of Representatives, as the case may be, if the Senate or the House of

Representatives, as the case may be, is not in session.

Section 6.

- (a) There is hereby authorized to be appropriated from time to time, out of any money in the Treasury not otherwise appropriated, such amounts as may be necessary to carry out the provisions and accomplish the purposes of this Act.
- (b) All money and all property which is converted into money received under section 3 from any government shall, with the approval of the Director of the Budget, revert to the respective appropriation or appropriations out of which funds were expended with respect to the defense article or defense information for which such consideration is received, and shall be available for expenditure for the purpose for which such expended funds were appropriated by law, during the fiscal year in which such funds are received and the ensuing fiscal year; but in no event shall any funds so received be available for expenditure after June 30, 1946.

Section 7.

The Secretary of War, the Secretary of the Navy, and the head of the department or agency shall in all contracts or agreements for the disposition of any defense article or defense information fully protect the rights of all

citizens of the United States who have patent rights in and to any such article or information which is hereby authorized to be disposed of and the payments collected for royalties on such patents shall be paid to the owner and holders of such patents.

Section 8.

The Secretaries of War and of the Navy are hereby authorized to purchase or otherwise acquire arms, ammunition, and implements of war produced within the jurisdiction of any country to which section 3 is applicable, whenever the President deems such purchase or acquisition to be necessary in the interests of the defense of the United States.

Section 9.

The President may, from time to time, promulgate such rules and regulations as may be necessary and proper to carry out any of the provisions of this Act; and he may exercise any power or authority conferred on him by this Act through such department, agency, or officer as he shall direct.

Section 10.

Nothing in this Act shall be construed to change existing law relating to the use of the land and naval forces of the United States, except insofar as such use relates to the manufacture, procurement, and repair of defense articles, the communication of information and other noncombatant purposes enumerated in this Act.

Section 11.

If any provision of this Act or the application of such provision to any circumstance shall be held invalid, the validity of the remainder of the Act and the applicability of such provision to other circumstances shall not be affected thereby.

APPROVED, MARCH 11, 1941.



On March 11, 1943, after affirmative votes of 407-6 in the House of Representatives and 82-0 in the Senate, the President signed the act extending the Lend-Lease Act for 1 year.

Appendix II

AMOUNTS OF LEND-LEASE AID AUTHORIZED

The amount of lend-lease aid that may be provided under the various acts is summarized as follows:

Lend-Lease Appropriations to the President	
First Lend-Lease Appropriation. Second Lend-Lease Appropriation. Third Lend-Lease Appropriation (Fifth Supp. 1942)	\$7,000,000,000 5,985,000,000 5,425,000,000
Total	18,410,000,000
Transfers Authorized From Other Appropriations	
War Department—Third Supplemental, 1942	\$2,000,000,000 4,000,000,000 11,250,000,000 2,220,000,000 12,700,000,000 3,000,000,000 800,000,000

Note.—In addition to the foregoing, Congress has with certain limitations authorized the leasing of ships of the Navy and merchant ships constructed with funds appropriated to the Maritime Commission without any numerical limitation as to the dollar value or the number of such ships which may be so leased. (See for example, Public Law 1, 78th Congress, approved February 19, 1943, and Public Law 11, 78th Congress, approved March 18, 1943.)

35,970,000,000

Appendix III

STATUS OF NATIONS

Lend-Lease Countries and United Nations

Dates of Signing of Agreements

Country Elig	clared ible for Lease Aid	Lend-Lease Agreement Signed	Reciprocal Lend-Lease Agreement Signed	United Nations Declaration Signed
Australia Nov. Belgium June Bolivia May Brazil May Canada Nov. Chile May China May Colombia May Costa Rica May Cuba May Czechoslovakia Jan. Dominican Rep May Ecuador May Egypt Nov. El Salvador May Ethiopia Dec. Fighting France Nov. Greece Mar. Guatemala May Haiti May Honduras May Iceland July India Nov. Iran Mar Iraq May Liberia Mar Luxembourg	6, 1941 11, 1941 6, 1941 6, 1941 6, 1941 6, 1941 5, 1942 6, 1941 11, 1941 6, 1941 7, 1942 11, 1941 11, 1941 6, 1941 6, 1941 11, 1942 11, 1942			Jan. 1, 1942

Country	Declared Eligible for Lend-Lease Aid	Lend-Lease Agreement Signed	Reciprocal Lend-Lease Agreement Signed	United Nations Declaration Signed
Netherlands. New Zealand. Nicaragua Norway Panama Paraguay Peru Philippines Poland Saudi Arabia South Africa Turkey United Kingdom United States U. S. S. R Uruguay Venezuela Yugoslavia	Aug. 21, 1941 Nov. 11, 1941 May 6, 1941 June 4, 1941 May 6, 1941 May 6, 1941 May 6, 1941 May 6, 1941 Aug. 28, 1941 Feb. 18, 1943 Nov. 11, 1941 Nov. 7, 1941 Mar. 11, 1941 Nov. 7, 1941 May 6, 1941 May 6, 1941 Nov. 11, 1941	July 8, 1942 Feb. 23, 1942 Oct. 16, 1941 July 11, 1942 Sept. 20, 1941 Mar. 11, 1942 July 1, 1942 July 1, 1942 June 11, 1942 Jan. 13, 1942 Mar. 18, 1942 July 24, 1942		June 10, 1942 Jan. 1, 1942 Jan. 1, 1942 Jan. 1, 1942 Jan. 1, 1942 Jan. 1, 1942

