

PROGRESS IN KOREA 1960

A Rebuilt and Expanding Economy

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INTRODUCTION

Ten years after the Communist invasion disrupted its traditional economy, the Republic of Korea now has established a foundation for development upon which it is staking its whole future. With the help of \$3.2 billion in U.S. economic aid during the period 1945-1960, the country has made strides toward economic development, although the goal of self-support is still distant.

Among the achievements are:

- Industrial production has increased more than 28 percent since 1958.
- Agricultural production has risen 19 percent in the past seven years.
- Mining output is up by more than 90 percent since 1958.
- The nation's gross national product has risen 20 percent since 1955.
- A rampant 12-year inflation was halted in 1957 and relative price stability has prevailed for three years.

Notwithstanding these and other gains, the country faces many problems common to developing economies. It has a shortage of trained managers, technicians, and skilled factory workers. Capital is limited, markets need to be developed, and production costs are relatively high. But these problems are less serious than some which the nation already has overcome.

Problems of a Divided Country

The struggle by the Republic of Korea for economic development since it gained its independence 15 years ago has been beset by difficulties probably unique among newly developing countries. Split off from the rest of the peninsula after World War II, the country began life with the less attractive half of a lopsided colonial economy. Most of the peninsula's natural and industrial resources lay across the 38th Parallel, as did the bulk of electric power facilities. The southern part of the country, with the greater share of agricultural resources, also had a much larger population to feed, clothe, and employ.

Some four million refugees fleeing communism in the North swelled the already sizeable ROK population, until today the country has about 23 million compared with about 10 millions for North Korea. Thus in an area the size of Utah, South Korea must support as many people as live in Texas and New York State combined.

Despite the handicap of a large population, a truncated economy, and the constant fear of invasion from the north, the country developed slowly but steadily from 1945 to 1950 with the help of \$1 billion in U.S. economic aid. The attack of the communists, however, then destroyed most of these gains, as well as much of the basic economy. Property losses from the invasion were put by the United Nations at \$1 billion, with a quarter of the population estimated to have been left homeless. And before the North Korean and Chinese forces had been driven back across the 38th Parallel, they had forced about 6,000 of South Korea's most experienced technicians and industrial managers to move north.

\$2.2 Billion Economic Aid Since '54

United States economic assistance to Korea, under various aid programs, has totalled \$2.2 billion since 1954, including more than \$42 million as the U.S. share of the contribution made by the United Nations Korean Reconstruction Agency (UNKRA) in that time. In addition, the U.S. has given South Korea \$1.6 billion in military assistance since 1956.

Altogether, American economic aid has accounted for about one-twelfth of the nation's resources. It has provided 90 percent of the ROK foreign exchange and -- through the use of local currency generated by the aid program -- about half of the annual national budget.

With the improvement of the country's economy, American economic aid has been reduced, from a high of \$338 million in 1956 to approximately \$200 million in 1960. This year's program included \$192 million for development projects, typhoon relief, and imported raw materials and \$7.3 million for technical assistance. In addition, Korea received in 1960 more than \$10 million under the Development Loan Fund.

One of the prime indicators of ROK economic progress is the improvement in the country's balance of foreign payments. Its deficit dropped from a high of \$373 million in 1957 to \$219 million in 1959, reflecting both an increase of foreign currency earnings and a reduction of some \$140 million in imports.

The American aid program has touched nearly every major economic activity of South Korea, and the results provide a clear picture of progress.

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AGRICULTURE

The Korean people eat better today because the farmer is producing more food than he has ever produced before. Grain, livestock, vegetable, and fruit production have swelled the nation's storehouses with record yields. While the increased farm production is largely the result of hard work and good crop and livestock years, there are many signs that new farming methods and organization have made possible the nation's improved diet.

Massive American assistance to Korea's farm problems began in 1954. The joint effort has made a record of positive accomplishment. Total grain production has increased by 11 percent. Poultry production has doubled, the draft cattle population has grown by 25 percent, and hogs have increased by 40 percent. Overall vegetable yield is up by 33 percent, and fruit production has witnessed a 43 percent rise.

For the first time since independence, farm production has enabled Korea to again enter the world's export markets to earn vital foreign exchange. Significant shipments of cattle, hogs, and vegetables have been made to Hong Kong. Japan and Okinawa have purchased Korean rice. And the U.S. Forces in Korea have bought more than \$1 million worth of fruit, vegetables, and poultry products from Korean farmers.

The amount of arable land used for food and fiber production has been expanded by one percent through reclamation and improved farming methods. Crop yields, however, have far exceeded that which was possible through the minor land-in-production increase.

Total rice production averaged a 20 percent higher yield for the three-year period ending 1959 than in 1956, the first year of the joint Korean-American effort. Each tanbo of cultivated paddy produced an average of 1.156 suk of polished rice in 1956; the same area yielded 1.485 in 1958, and 1.635 in 1959. Total polished rice production climbed to 16.5 million suk in 1958 and 17 million in 1959 (86 million bushels) compared to 12.7 million suk (64 million bushels) in 1956.

The rapid expansion of Korea's livestock industry since World War Two has brought more meat and poultry to the nation's dinner tables and more money to farmers. In 1945 southern Korea numbered only a million and a half chickens and 195,000 hogs. By 1949 the poultry population had grown to more than 2.6 million and swine had multiplied five times to 525,000.

Then came the communist invasion. The communist forces foraged for food and, when pushed back north, took most of the livestock they had not already slaughtered. By the end of 1950 the Republic of Korea was down

to only 156,000 pigs and 700,000 chickens. The number of draft cattle had been reduced from 700,000 to less than 400,000, and the Chinese soldiers had eaten almost every domestic duck in the country.

Adherence to strict conservation practices -- augmented by gifts of breeding swine, eggs and incubators from the United States -- increased the number of swine during 1951 to 350,000 and chickens to an amazing 1.4 million. The rate of increase continued despite the war.

After the armistice in mid-1953, improved breeding and raising methods introduced by the American aid program contributed to further expansion of the nation's livestock resources until, by 1960, there were more domestic animals being raised than ever before. The number of draft cattle topped one million for the first time in 1958 and now stands at 1.4 million head. Swine, which passed the million mark in 1955, increased to 1,450,000 and chickens soared to 14 million.

This spectacular farm production record has been influenced by a number of Korean-American agricultural and forestry programs, including

1. Creation of a national 4-H Club program with 6,806 active organizations composed of 223,157 members which include 66,861 girls and 157,296 boys. Initiated by an American, the 4-H objective is to teach rural youth -- the farmers of tomorrow -- better farming methods, sound health habits, and community responsibility. American and Korean technicians regularly circulate pamphlets, posters, project suggestions, and instructional material to all clubs. Among 4-H projects are raising pigs, chickens, and rabbits; cultivating silk worms; making butter and cheese; and growing a variety of vegetables to supplement farm income.

2. Formation of 2,538 farm improvement clubs for adults. Volunteer club leaders are trained in improved farm methods by national and provincial agricultural extension workers. Another important activity centers upon advising farm wives on practical sanitation, health, and home-making techniques which can help the whole family. Today there are more than 100 trained home economics agents at national and provincial level to help Korean women. Such skills as preparing and preserving foods, the making of cloth basket-aprons and farm clothes, improving laundering methods, and the planning of healthful, balanced family diets are taught.

3. Organizing and improving a national farm cooperatives program with an agricultural cooperative federation in every gun and individual cooperatives in every village which are controlled by the farmers. There are 18,179 cooperatives with a membership of 1,515,119 farm family heads. Progress is being made through intensive training of leaders and officials in management and marketing procedures, combining small village cooperatives

into larger units to give them more marketing and purchasing power, and helping to solve capital problems. The emphasis is on general purpose, livestock, horticultural, and special purpose crops as well as village level cooperatives.

4. Establishment of a national agricultural research program and a farm extension training headquarters at the aid-restored Central Agricultural Institute in Suwon, Kyonggi-do. The program has brought American technicians to the Institute to conduct courses in research and extension work. American experts conduct field training and assist provincial research workers and 1,000 country extension agents in all provinces and guns, and give lectures and demonstrations to farmers and village leaders.

5. U.S. aid has helped build 140 gun extension offices; nine provincial Institute of Agriculture buildings; 200 farm products storage warehouses; eight branch agricultural stations; and fiber, rice, and barley experiment stations. All these facilities have one purpose: To help the farmer improve his production and income by using the best methods of cultivation. The gun agent also is able to get information on any problem faced by the farmer, without cost to him.

6. Improved credit facilities for farmers. A system of production loans through the Korean Agricultural Bank has been established to help farmers who previously had no source of credit other than the high-interest loans of private lenders. With 17 billion hwan available in counterpart funds, more than 10 billion has been loaned in more than 215,000 transactions to cooperatives and as production loans to individual farmers. Of approximately 100 billion hwan in outstanding loans, about half are to irrigation associations and the rest to farmers. Contrasted with six to eight percent interest charges a month by private lenders, the Agricultural Bank loans have a maximum interest rate of 12 percent a year and average considerably below this figure.

7. A five-year program of land conversion, revegetation, and development of fuelwood was launched in early 1960. Designed to eventually rehabilitate four million acres of denuded hillside land, the first year's operations were completed as scheduled. Four hundred thousand acres were planted to grass, fuelwood, and commercial timbers. Growth has been excellent and costs have been materially decreased when compared with earlier programs. Community participation through 21,000 village forestry associations has been developed, and technicians trained by American specialists are carrying the message of conservation and land improvement to the nation's rural population. More than 350,000 acres of private and provincial forests have been replanted with 344 million common forest seedlings. These trees are chiefly used as firewood, poles, charcoal, and logs.

8. Irrigation projects to bring water to paddy reach the length and breadth of the country, with 214 projects to build more than 500 dams of all sizes. A consolidated and improved program based on economic priority has been established through Korean-American planning. Through June 1960, 69 projects had been completed and 160 were under construction at a cost of \$11 million in direct U.S. aid and 23.6 billion in counterpart hwan.

9. Increased use of fertilizers, more effective application of insecticides and fungicides, and control of soil moisture has resulted in the nation's highest rice crop yields in history. During the last year, 68,900 lime-phosphate demonstrations were completed on Korean farms to teach farmers the value of using these chemicals to increase barley yields. The program, which included the training of a thousand workers, followed 70,000 demonstrations in 164 guns and training of 1,500 workers in previous years.

10. Vast quantities of fertilizer -- amounting to about 700,000 tons a year -- have been imported by the American aid program, which has paid for practically all fertilizer imports during the past six years. The average cost to the American people has come to about \$55 million each year for the past six years. The money the farmer pays for the aid-imported fertilizer is put into an account in the Bank of Korea to finance many programs of benefit to the whole nation -- to finance the rice lien program, to build irrigation dams, for bridge and highway construction. So that Korea will be able to produce chemical fertilizer, the American aid program has financed the giant factory at Chungju, Chungchong-pukto. When it begins producing at full capacity of 85,000 tons a year, it will meet one-quarter of all the nitrogenous fertilizer needs of the country.

11. American agricultural commodities imported under an agreement with the ROK government earn funds which help provide nearly half of the money required for the Korean military budget. Surveys of the economic aspects of the program indicate that Korean farm production prices have been little affected by these imports. One program, known as Section 402 of the U.S. Mutual Security Act, has brought in wheat, barley, cotton, tallow, hides and skins, and rosin and turpentine. Another program, under U.S. Public Law 480, included 400,000 wheat, 300,000 barley, 30,000 grain sorghum, and 30,000 corn metric tons in 1958. The combined programs totaled \$90 million in U.S. aid.

12. Through 1960, 114 Koreans went to the United States and 113 to such countries as the Philippines, the Republic of China at Taiwan, and the Republic of Vietnam to receive training in improved farming methods and marketing procedures. These participants, in turn, have helped train hundreds of other Koreans at home.

13. Improved farm housing has been made possible through development of an earth block mixed with soil and cement or lime. Using this strong and cheap to produce block, farm villages are being instructed by local extension agents and community development volunteer leaders. Low-cost, easy to build farm house plans have been designed and prepared by Korean and American architects which are supplied to farmers free on request.

14. To help raise farm income and maintain a high level of production, an agricultural economics research program is being devised with U.S. assistance. The hope is for the introduction of the best brains in the nation, working in cooperation with ROK government and American technicians, to better plan this important segment of the national economy.

15. Through creation of an aid-assisted National Vaccine Laboratory for the production of high grade vaccines, Korea is now practically self-sufficient in the output of vaccines necessary for the control of the nation's most serious livestock diseases. Included are controls for Newcastle and pullorum in poultry, and cholera in pigs.

American assistance to agriculture is helping contribute economic self-support of Koreans by helping increase food and fiber production. This assures an adequate supply of food for the civilian population and contributes to the national defense effort by providing food for the armed forces. Assistance totaling \$23.9 million in dollar and \$88.4 million in counterpart funds has gone to the agricultural program in Korea from 1956 through 1960.

Combined efforts of Korean and American technicians are ensuring that the nation will be better prepared to develop its own agricultural programs in the years ahead. Korea's agricultural progress is heartening as the nation's farmers and livestock breeders seek a far higher level of production to satisfy the food requirements of an ever-increasing and consuming population -- and the United States is helping them to do it.

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FISHERIES

Surrounded by the sea on three sides, Korea is endowed by nature with large fishery resources. With approximately 120 species of fish, shellfish, seaweed, and other marine animals, the potential for export and domestic Korean fisheries and marine production is great.

The segment of the population depending wholly or partially on this industry for livelihood has doubled since 1945 to an estimated 800,000. This includes members of part-time fishing families and those

engaged in closely allied industries such as seafood processing and canning.

In 1958 the production of fish and seafood set an all-time record of 395,194 metric tons, compared with 285,148 in 1948. Record landings were anticipated for 1959, but typhoon "Sarah" in August shattered the predictions, and the sea harvest dropped slightly to 382,126 metric tons. Landings were curtailed due to the complete destruction of 3,100 fishing vessels, hundreds of trap nets, gill nets, and inshore equipment by the typhoon. Many of the vessels have been rebuilt as has much of the equipment through U.S. typhoon relief assistance and private aid groups such as CARE. Baring another natural calamity, industry members predict a peak fisheries year in 1960 of approximately 410,000 tons.

Fish is a main source of protein in the Korean diet, and the demand for seafood at reasonable prices is increasing. At the same time, there is a secure foreign market for Korean fish which meets international quality standards.

To assist the industry, the U.S. has invested \$5.6 million in fisheries financing, boat building, training, demonstration, equipment, and related projects like icehouses and canneries. Last year, 21 loans were made to fishing organizations under the Fisheries Revolving Loan Fund, totalling 129,000,000 hwan in counterpart funds. An additional 100,000,000 hwan was added to the Fund in 1960, bringing the total money available for ultimate loans to fishermen to 300 million hwan.

More than 500 boats of all sizes have been added to Korea's fishing fleet through the U.S. aid program, and a whopping 8,300 boats were being built in 1960 to replace boats sunk or damaged during the 1959 typhoon disaster.

Last year seven deep-sea fishing boats were built in Japan under the U.S. third-country procurement program. They included two long-line, two purse seiners (net fishing boats), two trawlers, and one refrigerated fish carrier, and are operated by firms located in Pusan, Yosu, and Seoul. In addition, five whale catchers displacing 80 tons each were put into operation in 1959. Financed by the ROK-USOM loan fund, they were built by the Dong Nam Fishing Company in Pangojin, Kyongsang-namdo and Pohang, Kyongsang-pukto. Most important, hundreds of other small vessels have been built by private individuals without outside aid.

USOM demonstration and training programs have helped increase fish landings and brought new operating economies to thousands of fishermen. Some 10,000 fishermen have observed demonstrations of new type fishing gear and equipment, such as power hoists, otter trawls, and electronic

navigational aids. This helped raise production more than 3,000 metric tons by the purse seine (net) fishing fleet alone in 1958 and by 5,000 tons in 1959. Another project to increase the yield per fishing unit through 1961 seeks to raise shellfish capture.

In addition, 71 diesel engineers and engineer instructors have been given a six-week course, and 58 took shorter courses in operation and maintenance of diesel engines. And 11 Korean specialists have studied American fisheries to learn techniques which they will apply to improve the home industry.

A ROK-USOM freshwater fisheries program to restock Korea's largely depleted rivers and lakes has been initiated. Fish hatcheries have been constructed at Chung Pyung and Chinhae, and distribution of carp fingerlings began during 1960. While a marketing and credit adviser has facilitated market construction projects at Pusan, Yosu, and Kunsan. Demonstration training programs in sanitation and time and labor-saving methods will be conducted with aid-provided equipment at the three ports. Revised fisheries credit and financing laws also are being prepared in collaboration with the ROK government.

Another program, vessel modification, which introduced modern design to the traditional fishing "Junk" to allow year-round operations -- rather than long lay-ups between seasons -- will end in 1961. Many shipyards have incorporated the USOM modified, multi-use designs.

Other programs include exploration and use of new fishing grounds and shrimp processing for export and domestic markets. About 10 tons of Korean fresh processed and frozen shrimp are now purchased monthly for consumption of U.S. Forces in Korea.

U.S. assistance to fishermen who suffered major losses from typhoon "Sarah" provided \$2.1 million to rehabilitate the industry. This money has been used to purchase imported lumber, diesel engines, and fishing gear to aid fishing fleets at Inchon, Changhang, Kunsan, Mokpo, Yosu, Cheju, Pusan, Pohang, Mukho, and scores of minor ports. Much of this materials has arrived, and a major portion of the destroyed or damaged buildings and craft have been replaced and repaired.

In an industry beset by seasonal landing variations, a serious spoilage problem, the hazard of natural disaster, and other difficulties, new production records have been set. The outlook in the years to come -- with the help of new government fishery regulations, modified boat design and fishing gear, improved techniques, and continued U.S. technical and financial aid -- is to push output still higher.

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The National Housing Program

Approximately 189,000 people will be living in 31,000 new houses by mid-1961, under Korean-American programs which promise to raise the general living standard for thousands more.

Through mid-1961, 7,000 houses affecting 42,000 people in 53 cities, towns, and villages will have been constructed under the Housing and Home Development Fund (HHDF) program. Another 5,000 houses for 30,000 people in 12 cities will have been built through the national aided self-help housing program. And 19,500 houses for approximately 117,000 people are being put up to house victims of last year's typhoon "Sarah" which swept across the southeastern portion of Korea. During 1961, 7,000 additional houses for 42,000 people will be sponsored by the HHDF and aided self-help housing programs.

The main features of the national housing program include:

-- Low-cost, long-term credit to enable financing of homes for workers and professional people;

-- A revolving Housing and Home Development Fund in the Korean Reconstruction Bsnk for house building loans on a self-supporting basis;

-- Aided self-help housing -- a program which enable low income families to build their own houses with advice from skilled craftsmene and loans from the ROK/USOM fund;

-- A Korean technical staff to assist loan applications and to insure compliance with the established building standard;

-- Housing research, demonstration, and training projects; and

-- Loans to Korean plants manufacturing building materials to develop a domestic industry.

Community action is largely responsible for growth of the housing program. Seven hundred and twenty-seven cooperatives have been formed by people having houses completed or constructed. The cooperatives have from the to fifty members and in some cases even exceed that number. There also are ten professional builders constructing houses under the program.

Through the four-year period ending December 1960, the program will have received \$5.9 million in U.S. aid, 19 billion in counterpart hwan, and one billion hwan from the ROK government. House owner contributions to the program total 10 billion hwan for land, value of self-labor, and equity capital. USOM also is providing technical advice and imported building materials for the housing projects.

The program, which provides for construction in both rural and city areas, includes individual and row family houses, and eventually apartment buildings. Local architects, engineers, building technicians, and construction companies are cooperating in the planning and execution of the housing projects.

COMMUNITY DEVELOPMENT

Korean-American community development projects, active in 274 villages in 40 guns throughout the country, are part of a comprehensive program to bring social and economic improvement to thousands of small communities. Financed by \$1 million in U.S. and counterpart funds, the program is demonstrating that villages can improve their economy and family welfare.

Approximately 170 government multi-purpose workers, with some basic training in health and sanitation, agriculture, education, and group organization activities, are pointing out the paths to progress. Directed by the National Community Development Council, they are training local lay leaders to plan and organize village improvement projects. Under the plan, village councils, which ultimately decide worthwhile projects, apportion the work according to the skills of the villagers.

In this way, with at least 50 to 90 percent self-financing, the villages have completed hundreds of projects, including 54 new community halls, 18 rice polishing mills, 199 reconstructed wells, and 33 irrigation, 11 bridges, eight marine, and 11 miles of road construction. Other projects include 2,588 new sanitary toilets, six new bathhouses, and 643 house improvements; two small hydro-electric, one water supply, and one drainage systems; and two land reclamation projects.

Among completed agricultural projects contributing to village prosperity are 38 cattle projects, three fish farms, six grain storage facilities, and seven chicken and rabbit farms. Farm industry has included starch and pickle factories, silk worm raising, chicken breeding, an orchard, and a honeybee farm.

The impact upon adjacent neighbors has resulted in many instances of village project imitation and self-help efforts for construction of public wells and toilets as well as road, marine, land reclamation, and compost projects. Even bee culture, rabbit raising, and sericulture has spread to other villages.

Outstanding among the 274 national village improvement projects has been literacy training of 11,823 men and women and adult education and discussion groups for approximately 23,000 people.

Although the national community development program has financially aided many village improvement projects, there are many indications that villages can prosper without outside help. However, when technical advice is needed, Korean specialists are ready to provide it free to the community. Through instruction and the organization of such groups as boys clubs and marketing cooperatives, village progress is possible even without outside financial help. The community development projects are proving that cooperation can benefit everyone who participates.

Social Welfare and Community Services

Complex social problems rooted in warfare, the trend of people from farms to cities, and the nation's developing industrialization have brought about a national awakening to the need for a long-range social welfare program in Korea.

During the past year, 14 social welfare facilities, completed with aid funds, have demonstrated their effectiveness to help provide solutions to the problems of war-disabled men, widowed mothers, and orphans:

Seoul Women's Trade Training Center has graduated 115 women who are widowed mothers of more than 300 children. More than half of the women are employed in trades -- beauty shops, barber shops, sewing, and hand-machine knitting -- which they learned at the Center, and 100 are now living in small individual quarters built for them by the Ministry of Health and Social Affairs. A new group of trainees, composed of 60 widows, with 146 children, and 43 older homeless girls, are learning a vocational skill. They have classes in "mother-craft", sanitation and hygiene, nutrition, and recreation, all of which are important for happy, healthy family life.

The National Boys Trade Training Center in March 1960 graduated its first group of 103 older boys from orphanages throughout Korea. Seventy-three have been placed in jobs in carpentry, radio repair, printing, metal work, commercial art, and sign painting. Other trades are being

added as additional equipment is received through the U.S. aid program. Transferred from orphanages this year, 175 new trainees have brought to 300 the orphans at the center.

Two Trade Training Centers for 500 disabled veterans a year at Kwangju, Cholla-namdo and Taejon, Chungchong-namdo are now operating at full capacity. The first group of 74 disabled veterans trained in one of seven trades have finished at Kwangju. Over 60 of the veterans have been placed in jobs or established in their own small business.

Care of infants, especially malnourished and abandoned babies, requires special staff training and facilities. Two training institutions in Cholla-namdo, assisted by USOM, care for more than 400 babies a year.

Teaching work skills, or knowledge of how to live, to people in complex urban areas in this period of rapid cultural, social, and economic change requires workers with psychological understanding and technical "know-how". This new field of social work education to teach Korean welfare workers how "to help people help themselves" has attracted 296 students to four-year undergraduate courses in the departments of social work at Ewha Women's University, Seoul National University, and Central Seminary. During the year the National Social Workers Training Institute held 19 in-service training courses for 500 workers and officials already in the field.

Final study of land sites, blueprints, and financing is underway between USOM, the Ministry of Health and Social Affairs, and the provincial governments of Kyongsang-namdo and Chungchong-namdo for a Family and Child Welfare Center, Youth Trade Training Center, and Women's Trade Training Center prior to allocation of building materials already arrived in Korea.

During 1960, three Korean welfare workers went to the U.S. for 12 months each to study child and family welfare, community organization, and administration. Three leaders in Korean welfare work also attended the U.S. White House Conference for Children and Youth.

Community Organization:

It is estimated that some 200,000 people a year are moving from the "subsistence economy" of agricultural villages to the "money economy" of life in towns and cities.

To meet these relocation problems USOM technicians are assisting the ROK government and voluntary agencies to develop "community coordination" programs. These have been initiated in Miari and Ung Am-dong assimilation projects in which more than 2,400 families or approximately 15,000 people were re-settled. The residents help plan and participate in such activities as mother's clubs for sewing, child care and nutrition, boys and girls groups for recreation and study, and a kindergarten.

Voluntary Agency Cooperation:

The USOM Social Welfare Section of the Community Development Division is responsible for guiding and coordinating the U.S. Public Law 480 Title III surplus commodity relief program. Last year, some 63,041 long tons of surplus commodities and other relief supplies worth \$12 million were imported by U.S. Voluntary Agencies.

One highlight was their outstanding performance in providing food and clothing to victims of the typhoon and floods which struck southeast Korea in 1959. Within ten days of the typhoon, the agencies, using 151 freight cars and three ships, sent 14,669,000 lbs of food and 675,000 lbs of clothing from Pusan to the critical areas. The agencies also are providing food support for U.S. aided refugee assimilation projects.

USOM representatives have met regularly with ROK officials and Voluntary Agency personnel on the National Relief Coordinating Committee discussing both emergency and long term relief requests. U.S. technicians also have supervisory responsibility of the CARE milk-feeding project which reaches a million and a half needy in schools and institutions.

Refugee Assimilation and Resettlement

Some 1,600,000 refugees were resettled on their own land between 1952 and 1955 by joint programs of the Korean government and the United Nations Command. Through 1960, another 450,000 refugees have been resettled on land provided by the government and are being assimilated into the economy.

These refugees -- 2 million of them -- were among the neediest of the 4 million North Koreans who fled south before and during the war, and another 5 million South Koreans who were forced to leave their homes and farms during the fighting. Today, the problem created by these displaced persons is under control, although considerable settlement work remains to be done.

In one of the largest mass-relief programs of its kind, the Korean Government and United Nations Command immediately after the war gave emergency help to the refugees, including medical care, food, clothing, and shelter. At the same time, plans were made for permanent settlement.

In this rehabilitation program, the American aid program has spent \$12,280,415 for imported construction materials since 1952. Millions of dollars more have been spent for food and clothing, which has largely been distributed by the United Nations Command and the Korean Association of Voluntary Agencies (KAVA). And, in addition, the hwan equivalent of \$34,112,553 has been spent on projects through the ROK Government -- including ROK appropriations, currency generated through American aid, and various contributions of land and materials by local governments.

Typical of how the problem of resettlement has been met is the program launched near the Demilitarized Zone (DMZ) in 1954. Here, as elsewhere in South Korea, land was made available by the United Nations Command to resettle 192,500 refugees on land most of them had possessed before communist occupation above the 38th Parallel in 1945.

Wherever possible, the Korean Government and U.N. Command have continued to resettle refugees on land between the 38th Parallel and the DMZ. While much of the area and roads are still supervised by military authorities, many farms are prospering and considerable civilian traffic has been restored.

The farm families have built traditional homes, quite functional and adequate, using materials provided through the ROK and UNC. This included imported lumber, cement, and nails. In order to get the farms into production, the ROK/UNC also provided sand, fertilizer, tools, and food where required.

Refugee families assimilated in South Korean urban areas have built houses under an aided self-help plan, using aid-imported materials and, recently, ROK loans. These houses have cement-tile roofs and glass windows, and are part of planned community development.

With the exception of certain security areas, resettlement of refugees on land provided by the government has ended. From 1953 through 1960, the ROK/U.S. program, operating through the American aid mission since October 1955, concluded 1,719 assimilation and resettlement projects throughout the country for 80,267 families numbering 452,533 people. These families have built about 75,000 houses with direct assistance from the Korean government and U.S. aid program.

Continued emphasis is put on complete integration of refugees into the Korean economy on a self-supporting basis through cottage industry and aided self-help housing projects. Thirty projects planned in 1959 for 1,500 families in Pusan, Inchon, and Seoul, jointly sponsored by the Government and the U.S. aid program, have been completed. Typical of assimilation housing construction are Pusan's Yun-san-Dong and Jonpo-Dong projects. Houses were built by the refugees with each family receiving 100,000 hwan loans from the government and 750 board feet of lumber and eight bags of cement from the aid program.

Efforts are also being made to teach handicraft and organize cottage industries in the new settlements to help the people become self-supporting. USOM has set aside \$750,000 for a community development home and cottage industry project. Equipment developed to assist in raising the income of sub-marginal rural communities is being imported from the United States and other countries.

Thirty-one multi-purpose workshops are being established through the ROK/USOM resettlement and assimilation program. The workshops are being built with materials supplied by USOM and equipped with low-power equipment and tools for wood and metal working, tinsmithing, shoe repairing, and electronics.

The Miari and the Ung Am-dong projects in assimilation and community development near Seoul have organized workshops with equipment and tools furnished by the American aid program. Under the ROK/U.S. program, 2,400 families built their own houses with advice from skilled craftsmen. The U.S. provided imported building materials, such as lumber, nails, and cement. Today, under USOM technical supervision, the residents are operating small factories making textiles, shoes, briquettes, and matches. Articles being sold, including socks, cloth, and canvas and rubber shoes, are helping to make the community self-supporting.

An assimilation saltern project in Sosan Myon, Kyonggi-do, was built by 338 "Iron Triangle" refugee families after thousands of hours of back-breaking labor. The aid program assisted the families with food and imported building materials. During 1958, the saltern produced 5,000 suk of evaporated salt, thereby providing full support for the new community.

Another indication of the success of U.S. assisted assimilation projects is the increasing number of voluntary requests for cessation of relief assistance by refugee families.

Among other types of self-support projects are livestock raising, sewing workshops, tile making, nail manufacturing, pottery making, and coal mining. Considerable attention also is given to land reclamation, oyster farming, and improving paddy and upland crop cultivation. Other projects for producing food include bee hives and fish hatcheries.

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EDUCATION

In the past 15 years, Korea has had Asia's greatest growth in education. The nation's important investment in future economic and social development since independence includes these impressive achievements:

- Primary students attending public schools almost doubled to 4 million.
- Middle public school student enrollment increased from 280,000 to 500,000.
- High school population raised by five times to 270,000.
- Colleges and universities grew nearly two times to 79,000 undergraduate and graduate students.
- More than five million adults taught to read and write so that the Republic of Korea now has a literacy rate of 90 percent. Not only has the nation become the only underdeveloped Asian country to practice mass education, but it also has met the problem of population explosion.
- Colleges and universities increased one-third, from 52 to 79.
- Academic high schools increased more than three times, from 166 in 1951 to 343 in 1960.
- Vocational high schools more than doubled -- from 116 to 280 in 1960.

This has all cost the United States, which has helped develop Korea's educational program, something in excess of \$60 million over a period of 15 years. But in percentages of people given education it has far exceeded Communist China's "Great Leap Forward". Proportionately the Republic of Korea has almost four times as many of its youth in colleges.

American assistance to Korean education is directed to the fields of higher education, teacher training, secondary school improvement and classroom construction.

In 1960, the United States allocated \$1,901,000 for educational projects conducted jointly with the Korean government. In addition, 1.8 billion hwan were spent from counterpart funds generated by the American aid program. More than half of the counterpart funds were spent for classroom construction and rehabilitation.

The overall goal of the joint Korean-American cooperative program is to help the Republic of Korea produce educated, useful citizens who will make a maximum contribution to progress in agriculture, industry, science, the arts, and education itself. Leading American educational institutions and skilled American educators are helping to achieve this objective.

In addition to assistance for university and secondary level institutions, American help for education in general is spread throughout the aid program. More than 240 Koreans went abroad for specialized study during the year. At the same time, workshops, seminars, special training classes, and informal discussions advanced the cause of education throughout the nation.

One of the most important aspects of the program has been education of teachers themselves. The George Peabody College for Teachers completed its fourth year of advisory work under a contract with USOM. The basic purpose is to assist the Ministry of Education and related institutions in Korea with improvement of their teacher training programs.

While the major focus has been on primary school education and instruction for primary school teachers, Peabody assistance also has been given in pre-service training of secondary school teachers, library science, educational research, curriculum preparation, textbook production, facilities work in selected schools and in-service teacher training.

Sixty-two Korean educators were selected for training at the Peabody College campus in Nashville, Tennessee. Most of these participants have already returned to Korea and are instructing in teachers colleges and normal schools or are employed by the Ministry of Education.

During 1960, science education was emphasized. For six months, an American specialist in science education worked throughout the country giving extensive instruction in science teaching techniques. Other activities continued in school construction, rehabilitation and maintenance.

Workshops were held during the year for architects, contractors and school administrators. In all, since the inception of the program \$9.1 million in direct aid and counterpart funds were spent through June 30, 1960 for the teacher training project.

Meanwhile, in the field of higher education, the University of Minnesota and Seoul National University teamed together to better prepare Korean faculty members for teaching, research and administration work in agriculture, engineering, medicine, and public administration. This project, under a USOM contract, resulted in 52 American educators coming to Korea during the past six years while 212 SNU faculty members received advanced training in the United States.

Out of the highlights of activities in 1960 was completion of an extensive study of national public higher education in Korea. This survey was conducted by eminent American educators and the report has since been considered favorably by Korean higher education authorities. However, issuance of the report and its subsequent discussion does not commit either the Korean or American governments to follow the recommendations.

Major points made in the report are:

-- A Board of Regents composed of laymen should be established in the Ministry of Education to manage, on a high policy level, all national universities and colleges.

-- Technical assistance should be extended to all five national universities.

-- SNU agriculture, engineering, medical, and public administration divisions are now able to stand on their own merits. Any future assistance should be directed to undergraduates in the natural and social sciences.

-- Principles of sound administration should be applied in all universities to eliminate duplication of services such as libraries, admission offices, and independent purchasing of supplies.

-- Many of the most important recommendations would require little or no financial outlay; several would effect significant economies.

Direct aid and counterpart fund allocations to the Minnesota-SNU project from 1954-60 totaled \$15.6 million.

Major American assistance for secondary and vocational education began in 1956 with advice and assistance in shop construction, purchase and installation of vocational shop equipment, plans for courses of study, and training of vocational high school teachers. Since then, U.S. aid for vocational high schools amounted to \$2,474,389 for shops and equipment. A total of 59 teachers went to the United States for training in teaching methods, use of modern equipment, and vocational school philosophy.

Nineteen technical high schools, 15 agricultural high schools, 19 commercial high schools, and several fisheries high schools benefitted from technical advice, equipment and the construction program. American technicians:

-- Advise the Ministry of Education on the countrywide vocational high school program.

-- Assist with selection of equipment and purchase and installation procedures.

-- Provide on-the-job training for teachers.

-- Conduct workshops for teachers and supervisors.

-- Advise on development of instruction methods and course content.

-- Help secure salvage equipment and supplies from U.S. Army stocks.

One of the major projects has been establishment of a comprehensive high school at Pyongtaek. It has several course majors, providing sound college preparatory studies and also offering, for those who need it, training suited to the occupations of the local community. A similar project is being assisted in Kunsan.

There are now more than 55,000 classrooms available for students, some 11,000 more than existed in 1950. Many of them were built with United Nations or USOM assistance. American soldiers, using materials supplies under the Armed Forces Assistance to Korea program, helped 500 local communities throughout the country construct 3,500 of the new classrooms. During the past year, 1,347 classrooms were constructed or rehabilitated with USOM assistance.

Korea's progress in classroom construction is especially impressive because the Korean War destroyed many of the facilities and disrupted the organization of the education system. Even before the war, the country's 44,700 classrooms were adequate for only about half the school population of that time. Then more than 21,000 classrooms were damaged or destroyed, making the shortage acute by the end of hostilities.

With a demand for still greater progress in education demanded by all quarters and the burden which must increasingly be met by the nation's own pocketbook, Korea's greatest asset is that it now has one of the best educated and most informed public on the Asian continent.

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Economic development and government reform are greatly dependent upon the availability of a sufficient number of competent, well trained individuals who can assume roles as key government officials and business administrators and managers.

The tragedy of partition and the disaster of war compounded the problem of finding and training capable men and women for careers in public and business service. Nevertheless, many capable individuals have been found and trained, and today are working as government and business administrators.

This achievement, in part, is due to technical assistance through the American aid program to help develop the human resources required by the Republic of Korea. To promote efficient operation of government and private enterprise, the USOM Public Administration staff has sought to provide advisory assistance to:

-- Various Ministries and Bureau for better administrative management techniques and practices;

-- Korean in-service training to institutions to develop managerial skills of government officials; and

-- Korean universities, giving academic training to university students in the fields of Public and Business Administration and Management.

Training is the essence of the Public Administration program. Through 1960, 280 government officials have been given training abroad in such fields as economic planning, administration, supply management, penal

administration, accounting, budgeting, tax administration, corporate re-organization, customs administration, census operations, government enterprise accounting, small business appraisal, and business administration. Depending upon the type of training required, the participant was sent either to the United States, Puerto Rico, the Philippines, or the Republic of China at Taiwan. Many more are trained in Korea's own institutions, assisted by USOM advisors.

Among the major activities and accomplishments recorded by the USOM Public Administration program are:

1. Washington university's assistance in the improvement of business education academic training at Korea and Yonsei Universities. New teaching methods, including the case study, have been introduced, and a management and plant production film was produced for use throughout the country.
2. Preparation for the 1960 National Census Population, Housing, and Agriculture. Questionnaires have been developed, \$725,000 of modern data processing equipment purchased, a new national statistical center built, and training of 28 government statisticians in the United States and the Philippines has been initiated for the first scientific census in Korea's history.
3. Tax Administration Reforms. A tax advisory group under contract with the Brookings Institution advised the ROK government on revisions to several tax laws to effect a more equitable distribution of the tax burden and increase government revenues. The program also included in-service and overseas training in tax administration and accounting practices for officials of the Taxation Bureau.
4. Economic Development Council. Receiving technical assistance from a group of advisors from the University of Oregon, the Economic Development Council of Korea is preparing a master plan for the integrated economic development of the country.
5. Public Safety. Experienced American advisors have been assisting through training and modern equipment to build the Korean National Police into an efficient, public service oriented body. The nation's primary law enforcement agency, its duties in addition to normal police functions have included fire protection, counter-intelligence, safeguarding the nation's public and private forests, and enforcement of sanitation laws. Emphasis has been given to the training of policemen in the role of police in modern society, and in the techniques of modern police work, including traffic control, criminal investigation, narcotics control, and communications. Fire fighters also have been trained in the use of

modern equipment procured by the American aid program.

6. Academic training of students and in-service training of government officials in Korea in public administration. All training is in the Korean language. A team of professors from the University of Minnesota has helped Seoul National University develop a comprehensive public administration program. The Graduate School of Public Administration now boasts 200 full and part-time students; the first two-year class will graduate approximately 100 students in April 1961. University of Minnesota advisors also have helped Korea's National Officials' Training Institute to conduct in-service training and management seminars attended by approximately 950 government officials during the past 24 months. Participants represent almost every branch of government and several military organizations.

7. Direct technical assistance to government bureaus. A USOM customs advisor, working with the Bureau of Customs, has recommended new personnel methods and techniques and improvements in existing customs regulations and tariff structure to help reduce smuggling. A foreign investment specialist helped draft a law to encourage large companies abroad to invest in Korea. U.S. financial advisors have worked with the Bank of Korea and the Korean Reconstruction Bank. An advisory team has helped the Office of Supply with its problems as procurement agent for the government.

Korea's achievement in public and business administration is a measure of the nation's ability to triumph over adversity. With much work still ahead, the government, educational institutions, and the American aid program are joined in a common effort to cultivate and perfect those human resources necessary for the democratic growth and economic development of a modern nation.

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An effective measurement of a country's organization for public health may often be found in its ability to cope with a major disaster. A little over a year ago, Korea's public health administrators and facilities successfully met the challenge of the worst natural disaster to strike the peninsula in 50 years.

Typhoon Sarah hit the southeast areas September 17, 1959. In addition to extensive property damage, approximately 850,000 refugees resulted from the storm, with 747 deaths, 3,186 injured, and 177 missing.

Emergency medical teams from the Ministry of Health and Korean and U.S. voluntary agencies were quickly organized and put into action. Medical care, including mass immunization, was carried out in the stricken areas. Drugs and medical supplies were furnished the Ministry from stocks provided by the U.S. public health relief program. And American health and sanitation technicians, cooperating with local health authorities, helped sterilize wells and other water supplies, and participated in sanitary activities necessary to prevent the spread of communicable disease.

The effective and efficient application of modern methods and techniques learned during recent years paid dividends to the nation. The Ministry's final report on the disaster said:

"Due to close surveillance and the hard work of sanitation and medical teams there has been no evidence of appreciable increase in the incidence of disease in the devastated area."

Since 1951 -- when the horrible specter of epidemics took thousands of lives in an era when 10 million persons were unable to provide themselves with essential medical care -- the public health of the country has witnessed vast improvement. Today, it is estimated that only 3 million people cannot provide themselves with medical care, and the control of epidemic-type diseases has been particularly dramatic between the worst war year and 1960. From a public health standpoint, smallpox and typhus have been all but wiped out.

The joint Ministry-American program in public health has involved expenditures of \$4 million in aid funds during the past two years. These activities are directed at long-range health and sanitation improvement:

1. Disease Control: Drugs for the treatment of 35,000 tuberculosis patients in institutions and through health centers. Expansion of mobile x-ray clinics and x-ray survey of 600,000 persons. Drugs to supplement the nation's supply for the treatment of over 30,000 leprosy patients. Nation-wide programs against diphtheria, pertusis, and tetanus, as well as typhoid, typhus, and smallpox. With U.S. support in the procurement of raw materials, Korea is now producing sufficient quantities of vaccine for the control of communicable diseases. Supplies and drugs for the diagnosis and treatment of venereal and endemic diseases. Support and development of laboratory activities in the diagnosis, prevention, and treatment of diseases, with aid being extended to the National Institute of Health, Provincial laboratories, and the National Chemical Laboratory.

U.S. technical training of 12 public health specialists and officials, including four in the U.S. for one year, three for one year in the Philippines, and five senior public health officials for two month's observation in Taiwan and the Philippines.

2. Health Facilities Improvement: Completion of 24 health-medical facilities, including the National Tuberculosis Hospital, the National Mental Hospital, isolation wards, health centers, and other buildings. Allocation and installation of furnishings, equipment, and supplies accompanied by staff and operating personnel assignment made by the Ministry. Six other facilities in various stages of construction.

3. Health Education: Providing technical assistance to all sections of the Ministry of Health and Social Affairs to help prepare, produce, and disseminate health information through lectures, films, pamphlets, posters, and exhibits; increase the quality of local health services through training programs; and helping secure local support and participation in local programs.

4. Nursing: A nursing project to provide technical assistance to establish adequate public health nursing services aimed at reducing and eliminating diseases and improving workers' health. Under the terms of a three year contract with Indiana University technical assistance is provided to develop professional nurses to serve as teachers and fill positions of leadership in nursing to bring about a higher standard of nursing care. In the field of public health nursing, assistance to 26 health centers to improve local health practices; 45 nurses given a two month intensive educational program for health workers; five nurses completed a one year post graduate course in public health nursing in Hawaii and the Philippines.

5. Environmental Sanitation: Construction of public wells, bathhouses, toilets, and nightsoil tanks. Training of Korean specialists and technical assistance in compost-plant operation. USOM has helped the Ministry of Health and Social Affairs to construct and repair 38,840 sanitary wells and has provided materials for construction of 461 public toilets and 2,406 bathhouses in cities and villages throughout the country. Technical guidance has been given to locally supported "self help" sanitation facilities projects which completed 1,309 wells and one community water supply.

Under an insect control program, 124,985 gallons of insecticides were provided for spray purposes by USOM and used in local areas for the control of fly-borne diseases, Japanese "B" encephalitis, and malaria. Three hundred and forty-four pounds of rodenticides distributed to urban areas to help reduce the incidence of rodent-borne diseases.

And 481,900 pounds of chlorine products for disinfection of water supplies to decrease the incidence of water-borne diseases distributed throughout the nation.

Concentrating increasingly on technical training, the American aid program is helping to create a nucleus of skilled Koreans who will be able to carry out all phases of the nation's health program. The USOM health activities aim toward the time when Korea can assume full responsibility for this vital function of government.

#

As democratic participation in governmental affairs increases, the citizens of Korea demand more information:

What is going on in the world? What is the government doing? What factors are affecting the price of rice? What is being done about the schools? Are there any government services that will help us with our farming problems? How can we avoid encephalitis? Why don't we hear about typhoons before they strike?

Even the village people in the mountain valleys, far off the main roads, want to know. And there are many things that a democratic government wants the people to know:

What is being done about various problems. Where the government needs the people's cooperation. How to increase food production, protect health, conserve resources. Why you should cooperate with the census. Where and how to cast your ballot. How people can help themselves to a better life.

Because there are few channels of information reaching out into the scattered villages and hamlets where most of the Korean people live, government must help provide such channels. Moreover, it must keep those channels free, see that information is accurate and reliable, see that government information services are dedicated to serving the people and not used for partisan political purposes.

The Government of the Republic of Korea disseminates information to all regions through the 14-station network of the Korean Broadcasting System, through a motion picture service that circulates a weekly newsreel and documentary films, through exhibits in all provincial capitals, through posters and publications, and through special services to the press.

USOM helped the Korean government establish a motion picture studio and laboratory, equip it, and train the personnel that operate it. This studio produces 52 newsreels a year, shown by theaters and mobile units throughout the country. It also produces three or four documentary films each month, ranging from cultural subjects to practical topics, such as how the elections are conducted and why watersheds should be protected. In addition, a dozen or more educational and training films are produced each year for use by ROK and USOM technicians in carrying out cooperative projects. Some of the subjects include, Building a Sanitary Well, Let's Destroy the Enemy the Mosquito, Daily Maintenance of Trucks, etc.

American advisors and contract technicians, working out of USOM's Audiovisual Division, are cooperating with ROK Government information agencies in this and other communications media fields. Well over 100 Korean specialists have been trained on the job in Korea, and 22 have been sent overseas for participant training in motion pictures, radio broadcasting, printing and publications, and various techniques of audiovisual communication.

Together, USOM and ROK technicians are working to provide information services which are directly geared to economic development activities -- telling people how to improve farm production, organize community development activities, prevent disease, conserve resources, market produce for better prices, and set up cooperatives. They also are spreading the use of audiovisual methods in education, training of government officers, and improving the skills of other workers.

Since the April Revolution, the ROK government information agencies have been engaged in a reform of their programs to insure that they will be reliable, responsible, non-partisan, and dedicated to public service in the democratic tradition. They have called upon American assistance for improving various information activities.

Evidence of this trend toward greater public service was the 1960 nationwide survey of radio listeners, which obtained for the first time information on how many people listen to radio, what they listen to, what they want more of, and what they dislike. From this survey program services are being re-examined with a view to giving the public more of the kind of programs they prefer, including more information on practical subjects of an economic nature.

Besides assisting in the development of films, exhibits, radio, and publications for informing the people, USOM audiovisual advisors are assisting the Ministry of Education in improving methods of teaching in the classroom. Two demonstration audiovisual centers are now in operation, in Seoul and Pusan, and two more are planned. These have been equipped

with a large film library, projectors, mobile units, and other audiovisual devices and materials.

A full program of workshops and training classes for teachers is maintained throughout the year, which has already reached over 10,000 teachers, supervisors, and other educators. The emphasis in these training sessions is on audiovisual methods and techniques which any teacher can use, with resources at hand, for improving the quality of teaching and raising the interest and participation of the students.

The purpose of USOM assistance in the communications media field is to establish the effective use of these media in Korea as a public service for spreading practical knowledge, improving skills and methods, increasing productivity, advancing education, and strengthening democratic processes. Small in terms of money, manpower, and equipment, its effect nevertheless is felt throughout society and the economy. Almost unnoticed from day to day, the increasing use of communications media for public purposes is influencing the lives of millions of people in constructive ways.

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During the past five years the American aid program in Korea (USOM) has sponsored one of the largest overseas training programs in the world. Some 1,980 Korean technical specialists have gone to the United States, Taiwan, the Philippines, and South Vietnam to study and work.

The purpose of this program has been to give already well-trained Koreans an opportunity to study the latest scientific and technological methods used in other countries. It is then up to these specialists, upon their return home, to adapt what they have learned to the specific problems of Korea's developing economy.

Candidates must have at least two years' experience in their field and are selected jointly by USOM technicians and the Government Ministry concerned. Each successful candidate is financed by USOM grants ranging from \$4,000 to \$6,000 per person. The grants have covered academic education, on-the-job training, observation trips, special seminars, transportation, and living expenses. Beginning January 1961, international travel costs will be met by the ROK government. Areas of specialization have included agriculture and natural sciences, industry and mining, public works, transportation, labor, health and sanitation, education, public administration, community development, social welfare, and housing.

Many of the participants have taken regular academic work in leading universities and professional schools in the United States or some other country. Others have worked in research laboratories or studied at technical schools. Some have inspected industrial plants, becoming familiar with equipment to be used in Korea, and observed production and management methods.

An important step during 1960 was the establishment of a Technical Training Center located at USOM in the Dong Kwang Building at Namdaemun, Seoul. Intended for use by returned participants and the U.S. Department of State's Exchange Grantees for post-training activities, the Center's primary objective is to further the technical and cultural development of the Republic of Korea. It permits those who have studied abroad to pass on information to those who have not had such an opportunity. Having a salutary effect on many phases of Korean progress, the Center sponsors lectures, seminars, workshops, and color slide and motion picture programs.

In recognition of the nation's manpower requirements, the USOM Technical Training staff works with the Republic of Korea government to promote selection of the best qualified participants and more effective utilization of returned participants.

More than 1,570 technical specialists have completed their training and are back on the job introducing new ideas necessary to the development of Korea. Many already have made substantial contributions to the nation's industrial, agricultural, and social life. A recent USOM survey of Korean participants showed that over half were producing outstanding results in their fields of training and another 35 percent were doing well on their assignments.

#

One of the most critical problems facing the Korean nation with the July 1953 Armistice was the rehabilitation of its devastated public works system. Roads, highways, and streets; hundreds of large and small bridges; and water and sewage systems were in critical condition. Korea's antiquated public works system, decimated during the three-year warfare, was on the brink of collapse, aggravated by population increases due to the influx of four million refugees from northern Korea.

With \$30 million in direct assistance and another \$90 million in hwan counterpart money generated by earlier U.S. aid, the American economic and technical assistance program has labored to rebuild and enlarge the country's public works.

This is the record of achievement:

- 616 new concrete and steel reinforced bridges;
- 57 large and small communities benefiting from water systems rehabilitated, built, or expanded;
- 330 miles of highways paved with another 900 miles slated for improvement;
- 270 kilometers of levees constructed for flood control as well as 90 kilometers of revetment and 24 kilometers of excavation and channel straightening; and 220 sluice gates to supplement ROK programs;
- 17 communities received city drainage support to build box culverts, closed storm sewers, and side and open ditches to restore sanitary facilities damaged during the war and to assist with highway drainage projects.

A major project, covering the ancient Chongae Ditch in Seoul -- built almost six centuries ago -- had 900 meters of concrete decking applied to serve as an additional traffic outlet from the city's downtown section to the rapidly growing east and northeastern suburbs.

- 70 participants have received public works training in the U.S.

The Eighth U.S. and ROK Armies have contributed financially, materially, and physically to Korea's public works rehabilitation. They have helped widen 1,060 kilometers of roads, reconstruct 35 concrete bridges and box culverts, built six new bridges, and made temporary repairs to 516 others. More recently, their efforts have been channeled to paving projects to improve the nation's highways as well as road widening. Materials supplied by Eighth Army, paid for by USOM, are furnished to the Republic of Korea Army which does the work on public highways and right-of-way cleared and engineered by the Ministry of Home Affairs. This coordinated effort already has resulted in paving of a five-mile stretch of Highway #13 southeast of Seoul, twelve miles on Route #29 near Wonju, and 10 miles on Route #3 north of Uijongbu, and the opening of Bird Pass on Route #13.

Highway transportation is the fastest growing sector of the economy. During the past five years inter-city bus travel increased 151 percent, city bus 387 percent, and truck tonnage 447 percent. Today, the nation's longest paved highway in history extends for 80 miles from Tongduchon near the 38th Parallel in the north via Uijongbu, Seoul, Suwon, and Osan to Pyongtaek in the south. Among other completed asphalt paved highways are:

-- Seoul-Munsan-ni, 23 miles, an important military and commercial route;

-- Masan-Pusan, 41 miles, which links two large cities and opens up for development the southwest corner of the nation;

-- Taegu-Yonchon, 22 miles, extending Highway #1 east from Taegu through one of the most intensely cultivated and developed agricultural areas of the country -- a new USOM-provided moto-paver which mixes asphalt and aggregate and places the mixture on the road ready for rolling with excellent construction, time, and money-saving results was used here;

-- Kwangju-Songjong-ni, 8 miles, which joins the capital of Chollanamdo with the important rail center.

Highways under construction and slated for paving include:

-- 12 miles on Route #13 from existing pavement extending south.

-- 14 miles as an extension of the Seoul-Chonan route.

-- 6 miles between Chonju and Kunsan.

-- 12 miles from Seoul to Inchon (resurfacing).

-- 10 miles between Yongchon-Kyungju.

-- 5 miles in Pusan City.

Today, most all sections of the nation's roads having heavy concentration of traffic have either been paved or resurfaced or are scheduled for paving. The important routes leading to all principal cities and towns have undergone improvement, and many of the bridges adjacent to these communities have been put back into service.

Among the bridges constructed with U.S. aid for imported materials -- cement, re-inforcing and shape steel, lumber, and paint -- is the longest bridge ever built by Korean firm, the 2,800 feet long Susan Bridge over the Naktong River in Kyongsang-namdo and the big 2,007-foot-long Kumnam Bridge across the Kum River on Route #1 in Chungchong-pukto.

Other major bridge construction includes:

-- Reconstruction of the Seoul Han River Bridge, 3,081 feet, Korea's most notable public works achievement in 1958 which marked a high point in construction techniques used by Korean engineers and labor.

-- Shinyon Bridge, 825 feet, over the North Han near Chunchon in Kangwon-do.

-- Wolchon Bridge, 1,150 feet, spanning the Kagokchon River on the East Coast Highway between Samchok and Ulchin, Kangwon-do.

-- Mokhang Bridge, 1,430 feet, over the South Han on the Chungju-Wonju route at the Chungju Fertilizer Plant, which opens to traffic the entire central eastern mountainous area of Chungchong-pukto.

-- Hyondo Bridge, 984 feet, across the Kum River between Taejon and Chongju, Chungchong-pukto.

-- Sangjin Bridge, 902 feet, which crosses the South Han in the Tanyang-Chechon route in Chungchong-pukto.

-- Mantan Bridge, 620 feet, at the western Seoul-Kyonggi-do border.

-- Kuknak Bridge, 1,152 feet, between Kangju and Songjong-ni, Chollanamdo.

-- Inchon Bridge, 315 feet, which spans a tidal inlet north of Inchon to link Seoul with two prime heavy duty highways.

Brining fresh water to Korea's cities and towns to meet the needs of an expanding economy and a growing population is the goal of the Korean-American waterworks projects. Cities, including Kwangju, Pusan, Taegu, Mokpo, Inchon, and Seoul, have vast waterworks projects underway. But small towns like Yaju in southeastern Kyonggi-do also are feeling the results of this huge public works program.

Fifth-one towns with populations under 100,000 are getting improved health conditions for the general welfare of their citizens. Some of these communities have never before had a central waterworks. Among the cities assisted are Suwon and Yaju, Kyonggi-do; Chunchon, Sokcho, Wonju, and Kangnung, Kangwon-do; Chongju, Chechon, and Chungju, Chungchong-pukto; and Chonan, Yesan, Nonsan, Kongju, and Onyang, Chungchong-namdo.

Other aided towns are Kunsan and Iri, Cholla-pukto; Sunchon, Cholla-namdo; Pohang, Kyongju, Andong, and Kimchon, Kyongsang-pukto; Chungmu, Kimhae, Chinhae, Samchungpo, Chinju, and Sachon, Kyongsang-namdo; and Cheju, Cheju-do.

Of approximately 200 waterworks improvement projects through 1960, estimated water consumption per person in the communities served by these projects has almost doubled -- from 42 liters for some three million persons in 1953 to 80 liters for five million people.

The substantial progress made on public works projects is contributing direct support to the overall expansion of the nation's economy. An impressive achievement record has been made and, with the passage of each construction season, the new works of men point to the greater enjoyment of life for everyone.

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The rehabilitation, modernization, and expansion of Korean industrial facilities moved steadily forward during the past year. By mid-1960, 230 small and medium industry projects were initiated with more than \$84 million in aid funds. By 1962 these projects should add approximately 56,000 new jobs and contribute an additional 20 percent to factory shipments and sales capacity in the Korean industrial potential.

Korea's industrial development is geared to man's age-old quest for better living and the enjoyment of a full life for the greatest number of people. In pursuit of people's capitalism, the nation's industrialization program is combating these problems:

- Employing the landless population;
- Assisting the generally underdeveloped farm economy;
- Providing goods and services to raise the gross national product for a growing population;
- Increasing capital investment;
- Reducing the unfavorable international trade balance;
- Increasing use of domestic raw materials; and
- Expanding basic industries to form a broad, integrated industrial base which will help alleviate national unemployment.

To help accomplish Korea's ambitious development goals, the U.S. has supported a wide range of industrial activities. Already, 100 small and medium industry projects have been completed and put into operation. These industries, located throughout the country, include;

1. Korean Silk Spinning Plant, Seoul
2. Haesong Filature Mill, Ansong
3. Kyonggi Filature Mill, Seoul
4. Namhan Filature Mill, Chongju
5. Samsung Filature Mill, Chongju
6. Chungnam Filature Mill, Yesan
7. Chonpuk Filature Mill, Chonju
8. Ilchul Filature Mill, Taegu
9. Chonnam Filature Mill, Kwangju
10. Naju Filature Mill, Naju
11. Sinhung Filature Mill, Taegu
12. Taehan Filature Mill, Taegu
13. Dalsung Filature Mill, Taegu
14. Kumchon Filature Mill, Kumchon
15. Chunchon Filature Mill, Chunchon
16. Wonju Filature Mill, Wonju
17. Samkwang Filature Mill, Taejon
18. Kangnung Filature Mill, Kangnung
19. Silk Weaving Plant, Chinju
20. Book Printing Plant, Seoul
21. Daehan Paper Mill, Seoul
22. Special Paper Mill, Anyang
23. Pharmaceutical Plant, Pusan
24. Rubber Hose Plant, Seoul
25. Knit Goods Dyeing & Finishing Plant, Taegu
26. Fishnet Weaving Plant, Seoul
27. Textile Parts Plant, Seoul
28. Textile Parts Plant, Pusan
29. Synthetic Fiber Plant, Pusan
30. Spun Rayon Plant, Taegu
31. Dae Han Steel Mill, Incheon
32. Dyeing & Finishing Plant, Seoul
33. Paper Bag Plant, Seoul
34. Embroidery Processing Plant, Seoul
35. Lining Fabrics Mfg. Plant, Masan
36. Cloth Printing Plant, Taegu
37. Brassware Manufacturing Plant, Seoul
38. Die & Injection Mold Mfg. Plant, Pusan
39. Knitted Goods Mfg. Plant, Taegu
40. Flax Fiber Mfg. Plant, Pyongchang
41. Menthol & Peppermint Oil Mfg. Plant Kwangju
42. Brassware Manufacturing Plant, Seoul
43. Lacquerware Manufacturing Plant, Seoul
44. Brassware Manufacturing Plant, Seoul
45. Silk & Rayon Dyeing & Finishing Plant, Pusan
46. Woolen & Worsted Dyeing & Finishing Plant, Pusan
47. Cast Iron Pipe Plant, Pusan
48. Metal Furniture Plant, Seoul
49. Woolen Processing Plant, Pusan
50. Fire Hose Mfg. Plant, Anyang
51. Anchor Chain Plant, Seoul
52. Non-Ferrous Sheet Metal Plant, Inchon
53. Shipyard Taeyang, Yosu
54. Paper Mill (Chunggu), Taegu
55. Wire Rope Plant, Masan
56. Pharmaceutical Plant (Taeyang), Seoul
57. Pharmaceutical Plant (Bumyang), Seoul
58. Die Casting Plant, Seoul
59. Edged Tool Plant, Kunsan
60. Chinaware Plant, Milyang
61. Pencil Manufacturing Plant, Chonju
62. Industrial Leather Plant, Seoul
63. Press Button Fastener Plant, Seoul
64. Printing Ink Plant, Seoul
65. Raincoat Plant, Seoul
66. Knitted Goods Dyeing & Finishing Plant, Seoul
67. Fish Oil Plant, Taegu
68. Auto Tire Plant, Pusan
69. Reclaimed Rubber Plant, Pusan
70. Tire Manufacturing and Recapping Plant, Seoul
71. Starch Plant #1, Seoul
72. Starch Plant #2, Chonpuk
73. Shipyard, Incheon
74. Shipyard (Hanguk), Pusan
75. Pharmaceutical Plant #1, Sosa
76. Pharmaceutical Plant #2, Seoul

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|---|--|
| 77. Pharmaceutical Plant #3, Seoul | 91. Textile Dyeing, Finishing and Bleaching Plant, Seoul |
| 78. Pharmaceutical Plant #4, Seoul | 92. Tricycle Plant, Seoul |
| 79. Pharmaceutical Plant #5, Seoul | 93. Communications Equipment Plant, Seoul |
| 80. Flour Mill #2, Seoul | 94. Bottle Glass Plant, Seoul |
| 81. Flour Mill #3, Incheon | 95. Pigment Plant, Tanyang |
| 82. Potassium Chlorate Plant, Seoul | 96. Paper Mill (Sam Poong), Seoul |
| 83. Aluminum Sulphate Plant, Seoul | 97. Ice Making Plant, Pusan |
| 84. Asbestos Plant, Anyang | 98. Ball Bearing Plant, Incheon |
| 85. Pesticide Plant, Incheon | 99. Industrial Training Programs for 381 Koreans in the United States and third countries Atomic Energy Training |
| 86. Marble Plant, Seoul | 100. Handicraft design, processing improvement, marketing, and business management |
| 87. Agar-Agar Plant #2, Soonchon | |
| 88. Agar-Agar Plant #3, Mokpo | |
| 89. Plastic Molding Plant, Seoul | |
| 90. Republic of Korea Clothing Factory, Pusan | |

All of these plants are operating and, although complete production records are not available, there is every indication of their success. For example, almost every branch of the textile industry is operating at record production levels; both tire producers are making between 200 and 250 high-quality tires a day; and the three paper-making plants had sales exceeding 2 billion hwan in 1959 and expect to sell about two and one-half times as much by 1962.

The industrial program has been undertaken to stimulate the production of such exportable goods as ceramics, pharmaceuticals, agar-agar, fish oil and liver oil, metallic copper and bismuth, monazite, hand tools, and handicrafts. The medium industry program includes plants for chemical, metal, machinery and machine parts, and textiles, as well as building and construction industries.

To be sure, there have been problems plants. These projects are not operating for lack of raw materials, usually seasonal, inadequate working capital, management deficiencies, lack of technical know-how, and failure of the entrepreneurs to find or develop markets. They affect, however, only a small proportion of the entire program. Moreover, every effort to correct their individual ailments is being made within the industry itself and by the Korean and American officials responsible for ensuring proper utilization of aid resources.

The 15 industries and their specific problems are:

1. Silicon Carbide Plant, Samchok, market glutted;
2. Fluorescent Lamp Plant, Yondongpo, requires more technical training;
3. Starch Plant #3, Pusan, finances;
4. Rubber Accelerator Plant, Seoul, financial and management problems;
5. Auto Spare Parts Plant, Inchon, finances;
6. Flash Light Case and Hardware Plant, Pusan; capital and technology;
7. Toy Manufacturing Plant, Taegu, management;
8. Starch Plant #4, Iri, no market;
9. Shipyard Pango-Jin, Pohang, finances, refund requested;
10. Ship yard, Hankuk, Kunsan, finances, refund requested;
11. Flour Mill, #1, Pusan, finances;
12. Leather Plant, Taejon, finances and management;
13. Limestone Crushing Plant, Tanyang, discovery of a large deposit of natural powdered limestone makes operation of the plant unnecessary;
14. Limestone Crushing Plant, Sosa, same as above;
15. Filature Mills, operate seasonally, depending upon local mulberry tree and silk worm culture for cocoons, but expected in full operation within two to three years through industry and agriculture-aided programs.

The \$42 million Chungju Urea Fertilizer Plant, largest and most complex of the joint projects, has been physically completed and now is in a shakedown phase. With modifications, under supervision of the plant's designer, the huge factory is expected to reach and maintain its daily rated capacity of 250 tons of urea fertilizer in early 1961. The plant will supply 85,000 tons of fertilizer a year, or approximately 25 percent of Korea's requirements.

Another USOM program is designed to make Korea's iron and steel production more versatile. The Inchon Wire Rod Rolling Mill is capable of using 6" x 6" cast ingots. It will eventually make approximately 50,000 tons annually of bar stock, fabricating and structural material, wire rods, and steel wire. At the present time Korea cannot supply from its own resources sufficient ingot and bloom, and this will necessitate the importation of these basic requirements through the U.S. saleables program.

With modernization and expansion, the Dae Han Copper Wire Plant at Inchon will use over 2,000 tons a year of domestically produced electrolytic and scrap copper to manufacture 1,800 tons of bare and variously insulated copper wire, trolley wire, drop wire, control cables, and bus bars. Import of these products, which have totaled as much as \$2 million a year, no longer will be necessary. Two new products will be lead-covered cable, now imported, and fluorescent light fixtures.

A modern aluminum rolling mill has been in operation since December 1959. Output now ranges from 700 to 800 3' x 6' aluminum sheets per 8-hour shift. New Investments of the sponsor's own funds is contemplated to increase productive capacity and the variety of sheet widths. The objective of additional engineering and expansion is to create a comprehensive coverage of all aluminum sheet sizes and thicknesses and to produce in the melting phase a capacity for the production of alloyed aluminum casting material for use throughout Korea.

Other important aid projects include a plant producing up to 1,400 tons of cast iron pipes, valves, and fittings for the country's water, sewage, and drainage systems; a bismuth refining plant; a plant to make 2,000 three-wheel low-cost, short-haul trucks a year; and a plant to produce railway wheels.

The USOM Small Industries Development Program is designed to broaden the base of consumer production and permit fuller use of Korea's resources. Some of the projects are new industries, others are existing plants being rehabilitated and re-equipped. The projects cover machinery, and metal products, electric equipment, fuel, agricultural processing, ceramics, textiles, chemicals, leather, rubber, paper, oil, and handicrafts.

A major factor in the nation's industrial production increase is the more than \$18 million in industrial and metalworking machinery and machine tools imported since 1954 under the American aid program. Coupled with imports of raw and semi-finished materials with purchases from U.S. funds, almost every type of industry in Korea has been assisted to:

- Replace war-destroyed machinery;
- Replace obsolete, worn-out machinery with modern machines, resulting in improved efficiency, better products, and increased production;

-- Establish new industries to enable Korea to produce more of its own consumer goods such as radios, electric fans, and bicycles; and

-- Purchase of spare parts to maintain existing machinery.

Rebuilt and expanding industries require trained personnel, the men who can keep the wheels of industry moving to pour more goods into the market. More than 400 Koreans have gone to the U.S. and other countries for technical training for periods ranging from a few weeks to one year. A variety of fields have been covered, including textiles, chemicals, ceramics, metal working, and management. Nuclear scientists also have participated to qualify for additional training on a nuclear reactor in Korea toward which the U.S. contributed \$350,000.

The USOM Industry Program is expected to benefit the Korean economy in several ways. Based on present estimates, the manufacturing component of the gross national product will be increased 339.5 billion hwan by 1965. This is approximately 45 percent above the estimate of manufacturing product values in 1960. The quality of products also is expected to improve through use of modern equipment and methods.

Combined with better utilization of labor and working conditions, greatest new employment opportunities will be found in food manufacturing, 7,000; manufacture of textiles, 10,600; and in the manufacture of paper and paper products, 7,500.

By 1962 the full impact of the USOM-aided industrial projects should bring these results:

-- Manufacture of paper and paper products is estimated to expand three-fold as compared with 1958;

--Rubber products and chemical plants will increase about 50 and 45 percent, with production of tires and inner tubes up four-fold over reclaimed rubber by 155 percent.

-- Food manufacturing increased by 15 percent, with canning and preserving of fish and other seafood expected to more than double.

-- Bleaching, dyeing, and finishing of textiles should experience an advance of 75 percent; and

-- Manufacturing of electrical apparatus, appliances, and supplies is estimated to develop about 60 percent.

With more than half of its USOM-assisted industrial program underway, Korea can look forward to continued economic development. Another 100 small and medium-scale industry projects have been programmed. Some are in the blueprint stage, many are undergoing financing, marketing, technical training, and management procedures, and others are in the construction and equipping stage. When completed and put into operation, they will mean more jobs and production for Korea's growing economy.

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Mining

The mining sector of Korea's growing industrial economy marked a significant series of advances in the past year. Its progress, however, must be measured against several basic problems:

- Rehabilitation of the nation's existing mines following years of exhaustive exploitation;
- Insufficient and usually worn out machinery and equipment;
- An acute shortage of experienced geologists, engineers, technicians, and mine administrators; and
- Two-thirds of the mining resources are located in Communist northern Korea.

Some \$20 million has been spent on 18 major mining projects throughout the nation by American mining projects. Not only have most of the nation's mines been rehabilitated, but an entire new industry has been re-created. These projects have ranged from reconditioning old mines to exploration and opening of new mines. The results, often encouraging, offer a promising mining future.

For example, Korea's known iron ore reserves may be increased by ten times as a result of a USOM-financed comprehensive aerial geological survey to further exploration for iron ore and other minerals. Approximately half of the territory of southern Korea was surveyed to advance by at least 50 years the evaluation and development of the nation's natural resources.

USOM and the Korean Geological Survey estimate about 25 million tons of magnetic iron ore reserves are needed to support a steel industry. With five million tons of known reserves, the 118 magnetic anomalies or deposits

discovered through the aerial survey may provide the major part of the additionally required 20 million tons. But the answer to this vital question will not be known until the natural resources evaluation is completed by 1963.

Coupled with the aerial geological survey were these additional aspects of metal and mineral development during the year:

-- Approximately 200 non-ferrous metal mines and prospects have been examined by USOM and contract personnel; 24 favorable sites have been selected for further exploration by means of machinery made available through USOM funds under the Korean Office of Minerals Exploration Program. Twenty sets of mining exploration equipment have been imported from the U.S. and Great Britain. These include large heavy duty trucks, air compressors, rock drills, and mine cars and rails for use in all provinces. The equipment, based at Chang Hang Smelter and the Chungju Urea Fertilizer Plant, is used on a rental basis with trained drivers and operators working to prove the 24 most favorable non-ferrous mines. Ultimately more than 200 mines will be explored and evaluated.

-- Already promising evidence of other potential earners of foreign exchange has been uncovered, including such minerals as gold and silver, tungsten, amorphous graphite, copper, kaolin, talc, bismuth, fluorspar, and lead.

-- A diamond drilling program totalling 2,540 meters at the Yang Yang Mine of the Dae Han Iron Mining Company in Kangwon-do has proved 2.5 million metric tons of recoverable magnetic iron ore.

-- The \$3.5 million chemical refinery at Sandong Mine operated by the Korea Tungsten Mining Company is continuing to yield a yearly average of \$2 million with an estimated 30 year reserve; the world's largest producer of tungsten was rehabilitated in 1956 by the Utah Construction Company as an American assistance project.

-- Completion of a comprehensive technical survey at Chang Hang Smelter and Refinery. The only gold, silver, and copper smelter and refinery in southern Korea, it plays a key role in the non-ferrous mining industry for 100 mines which market their ores to the smelter. To install a lead smelting and refining department and a cyanidation and amalgamation section to recover and refine gold from siliceous ores, \$350,000 has been appropriated by USOM to at least double the smelter's existing capacity of 2,000 tons of ore a month.

The training of managers, geologists, technicians, and engineers is essential to the development of the nation's mines and mineral resources. Already 37 mining specialists have visited the U.S. to study its mining industry. Moreover, five USOM technicians and 14 contract engineers are assisting in the important work of coordinating the development of Korea's mineral resources.

Coal, one of Korea's richest natural resources, is expected to hit a new production high of more than five million tons in 1960. A considerable amount of increased production will be used for industrial expansion, but household use alone will account for consumption of 3.4 million tons.

The record production will more than triple the 1.7 million tons mined in 1957. With increased mechanization and further modernization, Korean coal miners are aiming for a 1964 peak of eight million tons.

This impressive achievement in anthracite production has been made with assistance from the American aid program:

-- Extensive diamond drilling has resulted in discovery of 40 million tons of probable new coal reserves since November 1957.

-- Development of an anthracite briquette with hard, durable, and high heat qualities for eventual use by the nation's industry and thermal plants as a substitute for costly imported oil in electric power production.

-- \$500,000 worth of drilling and mining equipment has been supplied by USOM to the Korean mining industry.

-- Guided by coal mining experts from the U.S., Dae Han Coal Corporation and some 60 privately-operated mining firms have introduced better techniques and up-to-date equipment. The Coal Operators Association has also worked on these problems and is contributing to the expanded efforts by organizing a road building program in the most important producing areas in Kangwon-do.

In 1960 alone, the Korean government and private mining firms will have invested more than a billion hwan in coal mine development. The U.S. will have matched this with \$1.2 billion in equipment and supplies for mining and marketing of coal. This increase in the supply of coal will help the average town and village households, too, as more families utilize locally made briquettes for ondol and cooking fires.

Great strides have been made in Korea's mineral development. Much more remains to be done to produce the minerals and fuel needed for the growing national economy. With the present production pace and additional modernization plans, Korean miners expect to meet and may surpass their long-range production goals so that more minerals are introduced into the nation's economic arteries -- to industry and for the export market.

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POWER

More Power For Homes and Factories

Despite the impressive growth of power production in Korea, demand for electricity exceeds output and is expected to continue to do so for another five years. Though a critical problem, it results from the economic rehabilitation of the nation and the expansion of industries and services which are, in part, responsible for the increased power need.

In mid-1948, when the Communist rulers of northern Korea abruptly cut off power supply to the Republic, a serious shortage of electricity developed. This was aggravated by the severe damage to the Republic's limited power facilities during the Korean War.

During the last decade, Korea's electrical power output has more than tripled. Power production has climbed to an all-time high of 1,703,000 kilowatt hours for the year ending June 1960. It was only 694,000,000 in 1948 and dipped to 336,600,000 in the war year of 1951.

Since 1954, \$84 million in American aid funds have added 139,000 KW to the nation's power generating capacity as well as improving the efficiency of existing facilities. Nearly half of Korea's dependable generating capacity has been provided through American aid funds. Today, power used by each Korean is estimated at 71 kilowatt hours a year. In 1948 it was 35 and in 1951 only 17. If all goes well, the dependable supply of power will be hiked from 280,000 KW to 630,000 KW in five years. The goal, of course, is not only to fill the present gap, but also to support future industrial development.

Among the steps taken to build up Korea's power production are:

-- Construction of three aid-financed thermal plants, including Masan (50,000 KW), Samchok (25,000 KW), and an addition to the existing Tangin-ri Plant at Seoul (25,000 KW).

-- Rehabilitation of the old Tangin-ri plant, the Hwachon Dam and power house near the 38th Parallel (27,000 KW) to its prewar normal capacity (54,000 KW), and the Yongwol plant (56,000 KW).

-- Funds have also been provided for procurement and installation of new equipment, parts, and transformers; erection of new power lines, poles, and steel towers; and rehabilitation of sub-stations.

-- Operational training in the U.S. of 153 management administrators, technicians, and engineers in all phases of hydro and thermal power production, distribution, and business methods has been provided by the American aid program.

Meanwhile, a long-range power resources development program, requiring tens of millions of dollars to catch up with the power demand, has been blueprinted by the Government-USOM power advisors. Among the projects being implemented or considered are:

-- Funds for the rehabilitation of Chong Pyong and Unam hydro plants now in process have been provided from American aid sources.

-- Construction of a 30,000 KW thermal plant at Kunsan, Cholla-pukto, with \$9.75 million in U.S. aid funds.

-- Rehabilitation of the Yongwol thermal power plant with \$5.85 million in U.S. aid funds to restore the plant to an 80,000 KW generating and delivery capacity.

-- Preparation of power requirements, financing, and end-user rate adjustment studies to put power production on a sound pay-as-it-is-used basis.

-- Completion of engineering and design to determine the feasibility of construction through a U.S. \$1.5 million Development Loan Fund-financed project for a proposed 150,000 KW hydro plant on the Han River near Chungju.

-- Construction of a 100,000 KW thermal plant with Republic of Korea financing at Pusan, Kyongsang-namdo.

-- Installation of a 20,000 KW gas-turbine generator at Songjong-ni, near Naju, Cholla-namdo.

-- Purchase of a 30,000 KW electric power generator barge.

Inevitably, the solution to the nation's power supply and demand is linked to Korea's natural resources -- its rivers and a bountiful reserve of anthracite. Although very expensive to build, hydroelectric generating

plants are less costly to operate. Thermal plants, on the other hand, cost much less to build, have somewhat higher operating costs, and have a lower total cost than any but the most favorably located hydro plants. Thermal plants also supply power during the dry periods when the hydro plants have insufficient water to operate at more than a fraction of capacity, and help provide more jobs for plant operators, coal miners, and transportation workers.

The electric current carried by the growing network of high-tension power lines across the face of the land is the life-blood of the nation. Its quantity and distribution determines the nature and pace of national economic growth. In six short years Korea has made notable progress in electric power production, and it faces the future with the determination built upon success to provide more power for the nation's expanding industry and commerce.

#

Communications

Rapid communications cannot be separated from national development and sound economic growth. A modern communications system is vital to public health, welfare, and safety; to business, the home, and education; to agriculture and industry; and to the conduct of government, the defense effort, and to international relations and commerce.

With U.S. assistance and the expenditure of \$20 million and the hwan equivalent of \$10 million, the war-damaged Korean telecommunications system has been restored and expanded to meet the needs of a growing economy.

Today, the Korean telephone system is self-supporting. It has spent approximately \$3 million of its own funds on plant extensions and \$4 million to support the postal system. This economically strong system has made it possible for the Government to secure \$3.5 million in U.S. loans to finance additional expansion programs.

There are about 80,000 telephones in service in Korea. This represents a hundred percent increase compared to the system in service before the Korean War. And it is more than eight times the number of serviceable telephones in 1953's war-remnant, poorly maintained, and obsolete system.

A major ROK-U.S. \$5 million telecommunications plan will bring 45,000 new lines to Korea by 1963. It represents a 60 percent increase over the present system. Systems and cities which will receive the new telephone lines are the Kwanghwamoon District of Seoul, Chunchon, Chonju, Taegu, and Pusan. The U.S. Development Loan Fund will finance 30,000 lines with \$3.5 million and the American aid program will pay \$1.5 million needed for the expansion program to 115,000 lines.

Last year, the Ministry of Communications, using its own funds, installed new radio circuits to Japan. As a result, better service doubled overseas calls from Korea to the U.S. In addition, direct radio telegraph service to Hamburg, West Germany, was opened, and preparations are under way for direct radio-telephone.

Four new telephone systems were placed in service during the past year. These included three Seoul area offices -- 3,000 lines at Seoul Central, 2,000 lines at Yongsan, and 1,000 lines at Yong Dong Po -- and a 1,000-line office in Suwon. In addition, \$1 million worth of spare parts and operating supplies were procured with USOM funds to replace semi-defective equipment. Ultimately, the defective equipment will be repaired and used in other telephone installations.

An indication of the maturity of the Korean telecommunications system is the rapidity and efficiency with which it handled the vast communication problems during the visit of President Eisenhower to Korea in June 1960. The service rendered to the United Press International, Associated Press, and other foreign news agencies was singularly praised by the news media personnel.

Korea's list of telecommunications accomplishments is impressive and growing. Other notable advances are:

-- 21 completely new manual telephone offices and one 8,500-line dial office.

-- Rehabilitation of seven offices in Pusan, Seoul, Taejon, and Taegu.

-- Radio voice communication between the mainland and Cheju-do and 10 of the larger off-shore islands, bringing these communities into daily contact with the outside world for the first time.

-- An increase from 216 small telephone offices throughout the country in 1955 to 350 in 1960.

-- Installation of small switchboards and extended telephone communication service to 100 small towns previously without any voice communication with the rest of the nation.

-- Repair, replacement, and extension of thousands of feet of outside wires and cables and the installation of thousands of new concrete and wood telephone line poles.

-- Reconditioned central offices now averaging less than five percent troubles a month compared with a monthly average of over 50 percent troubles encountered three years ago.

-- Eight new automatic offices under way, including three in Seoul, two in Pusan, and one each in Taegu, Chunchon and Chonju.

-- Technical training of 60 Koreans in the U.S. and countless hundreds in Korea in all phases of telecommunications under USOM-sponsored programs since 1954. Working under an aid-financed contract, the Philco Corporation of the U.S. has furnished both technical and management assistance to the Government on communications since June 1956. While the Siemens-Halske Company, a West German firm, supervised equipment installation and operation at the Seoul Yongsan Telephone Exchange and conducted a training school for Ministry of Communications personnel for the past year.

-- Production of training films covering the installation of urban distribution wire and telephone installation.

The task of rebuilding and extending the nation's nerve center has been inseparable from the overall growth of the national economy. With a record number of telephones in service today, coupled with a latent demand of at least another 100,000 telephones, the nation faces its task with confidence. Most important, the Korean telecommunications administrators and technicians are proving they can do the job for the people.

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Transportation

Bringing fertilizer to the farmer and moving his crops to market, getting raw materials to the factory and taking production to hundreds of thousands of customers, the smooth flow of the nation's exports and imports, the mass movement of people for pleasure and commerce, and rapid delivery of men and weapons in time of war -- all depend on an efficient rail, sea, air, and road system.

The backbone of the nation, transportation is essential to Korea's industrial and economic progress. Accordingly, priority has been given to its rehabilitation and development by the American aid program.

Rail:

The Korean National Railway (KNR) was a skeleton railroad in 1953. Its track, rolling stock, shops, communications, offices, and stations were in ruins. Today, rebuilt, modernizing, and expanding, the KNR binds the country in an efficient transportation network. This phenomenal recovery has been made possible through the expenditure of vast sums of money from the Korean national budget and the labor of 40,000 KNR employees. Behind this achievement is American economic and technical assistance totaling, since 1954, \$152.8 million and 42.3 billion hwan in counterpart funds generated by dollar aid.

The fastest train in Korean railway history, the Mugunghwa, or Rose of Sharon, began operation in February 1960 on the Seoul-Pusan Line. It runs the 279-mile course in six hours and 40 minutes and makes a round trip possible in one day between the two cities. This is 30 minutes faster than the Tongil, or Unification Express also servicing the Seoul-Pusan Line.

Powered by 95 U.S.-built and financed Diesel-electric locomotives, 75 converted oil-burning steam locomotives, and 189 locomotives which burn Korean coal briquettes, the KNR is maintaining faster and better schedules, turn-around-time for passenger and freight trains has been greatly reduced, thanks to Diesel operation, and costs have been sharply cut.

Thousands of tons of steel rails, wooden ties, and other materials have been used to rehabilitate the KNR. The system has been expanded to include:

- 2,163 miles of main track
- 1,851 bridges
- 276 tunnels
- 59,159 telecommunication poles
- 54 telephone switchboards
- 333 coaches and 3,394 freight cars imported under American and United Nations assistance programs.

- 1,007 steel gondola cars restored to service by private shops
- 13 self-propelled motor coaches reconditioned and powered with new diesel engines
- Four KNR workshops rehabilitated and equipped to repair and rebuild passenger and freight cars.
- 196 kilometer of track for eight industrial rail lines constructed
- 13 kilometers of a new rail line under construction in Kangwon-do between Mukho and Okkay.
- 111 KNR stations destroyed or damaged during the Korean War rebuilt

During September 1959, a severe typhoon struck the southeastern part of Korea causing severe damage to rail beds, tracks, poles, and bridges. Restoration was made possible through American aid resources amounting to \$136,000 and 562 million hwan.

At the height of the Korean War in 1951 the KNR carried 24,071,469 passengers and 13,032,714 tons of freight, mostly war materials. By 1956 these figures were 66,293,303 passengers and 11,044,736 tons of freight. With rehabilitation, this "lifeline" carries more freight and passengers than in pre-war days. An average of more than 71 million passengers was carried by the KNR during the past two years and 13,772,763 tons of freight set another record in 1960.

The KNR's new stations, shining steel rails, and the claxon blast of Diesel powered passenger and freight trains are special symbols of Korea's progress. Wherever its tracks reach, the KNR stands for the economic development of the whole Republic.

Marine:

As a peninsular nation, the Republic of Korea depends upon marine transportation as a vital part of its total economic development. In the southern part of the country, a long coastline and hundreds of offshore islands hold 225 minor commercial and fishing village ports. There also are 10 major ports including Inchon, Chang Hang, Kunsan, Mokpo, Yosu, Masan, Cheju, Pusan, Pohang, and Mukho.

The Port of Kunsan was heavily damaged during the Korean War. Thanks to generous United Nations and American assistance amounting to 73 million hwan and 1.3 billion hwan, respectively, the port was rehabilitated. This included three twin floating piers, warehouses, dredging, channel rock removal, wharf paving, and safe navigational aides. About 100 ocean going vessels call at Kunsan each year, bringing fertilizer, grains, coal, pitch, and lumber. Once a busy rice exporter, Kunsan may again witness the outward flow of cargo, particularly foodstuffs from Korea's agriculturally rich Cholla provinces which the port serves.

Like Kunsan, all of Korea's major and minor ports have received assistance from the American aid program during the past seven years, ranging from dredging, warehouse construction, and installation of navigation aides, to the building of breakwaters for small fishing villages. U.S. financial and technical assistance to marine activities totals \$23 million and 24 billion hwan in counterpart funds.

Through 1960, the following U.S. aid program marine activities had been completed:

- 61 new transit warehouses built in 11 ports
- 9 warehouses repaired
- 3,000 meters of wharf and revetment repairs in 13 ports
- 1,716 meters of wharf, dock, and pier construction in 15 ports
- 5,082 meters of dikes built for land reclamation.
- 11,318 meters of breakwaters and jetties constructed and repaired
- 76,500 square meters of dock resurfacing
- 6,350 square meters of channel rock removed from a ledge near the Kunsan floating piers
- 662 meters of quay wall constructed in 6 ports
- 89 marine navigation aids installed or improved, including 3 radio beacons for safe navigation of coastal shipping

- 6 coastal vessels costing \$974,000 added to the ROK merchant fleet
- 10 vessels amounting to 1,590 gross tons in construction and repair of 12 ships amounting to 1,835 gross tons in 1960
- Two 27-ton gantry cranes installed for unloading ships in Pusan and Inchon
- The backlog of silting in Korea's major harbors reduced by over 6,500,000 cubic meters, and 200 acres of valuable land recovered for military and industrial use.
- 1960 port and harbor program confined to reconstruction and repair to facilities damaged by typhoons in September 1959, including breakwaters and docks

The rehabilitation phase of Korea's marine facilities is complete and USCM and the ROK government are concentrating on further improvements to aid the nation's marine transportation.

Already apparent, the full impact of the marine projects will be felt over a number of years -- by savings through efficient handling of cargo at ports, lower claims for damaged cargo, safer navigation of vessels, protection from damage to vessels, and increased employment and income to construction personnel and equipment operations as well as to the nation's dock and ship workers.

Civil Aviation:

An epoch in Korea's civil aviation history was marked with the opening of a modern terminal building at Kimpo International Airport near Seoul in February 1960. Costing \$600,000 in counterpart hwan, the reinforced concrete building with glass facade includes airline operation offices and sales counters; passenger waiting rooms; customs immigration, health, and currency control offices; a two-story observation lounge; shops, rest rooms; a special lounge; and telephone booths.

Designed for future expansion, a new air-traffic control tower and a second story will be added for rooms for aircraft crews; shops; restaurants, coffee shop, and kitchen; and a room for newsmen.

Although aviation in Korea is in the first stage of development, the operation of the modern terminal building has provided a strong impetus for the progress of air transportation.

Domestic air service in 1958 carried 44,928 passengers as well as 376,000 pounds of freight and 1,730 pounds of mail. In 1959 the domestic air service carried 72,562 passengers, a 61% increase; 796,260 pounds of freight, a 112% increase; and 2,500 pounds of mail. International carriers in 1958 flew more than 24,000 passengers to and from Korea and carried altogether almost two million pounds of cargo, 70 percent into the country, and 1.3 million pounds of mail. These statistics are significant considering the nation's youth in the air transportation field, the changing population attitudes toward its possibilities and capabilities, and the world-wide growth of aviation.

American technical and economic assistance to civil aviation centers on the training of Koreans for international and domestic aeronautical telecommunication and traffic control, the installation of navigational aids, and the improvement of airports.

Among the highly important assistance activities are:

-- Installation of a VOR and ILS, the most advanced radio aid to air navigation, at Kimpo International Airport.

-- Completion of a high intensity light system at Kimpo to give incoming pilots visual guidance during periods of poor weather and low ceilings.

-- New aircraft parks and runways to accommodate the largest jets now going into service at Kimpo.

-- Major repairs to Cheju airport to facilitate service between the large island and the mainland.

-- New runway at Samchok airport to assist in the development of domestic air transportation between the east coasts and other parts of the nation

-- Installation of an electric navigational aid and aero communication station at Pusan

-- 25 Ministry of Transportation employees have trained in the U.S. under the civil aviation training program. They have been instructed in such fields as communications, aircraft inspection and maintenance, air traffic control, electronics, traffic and sales, airport engineering, civil aviation administration, aeronautical instruction, and aircraft and engine maintenance.

U.S. technicians advising the Ministry of Transportation on all phases of civil aviation are working for the not-too-distant day when Koreans will assume complete responsibility for air transportation in Korea.

Highways:

More motor vehicles are operating on Korea's streets and highways than ever before in history. Today, more than 500 million persons and 8.8 million tons of freight are carried yearly by cars, trucks, and buses.

Fifteen years ago only 7,326 vehicles operated throughout the country. Even with record motor registration of 30,942 vehicles today, this number is still one of the lowest per capita registrations of motor vehicles in the world. Of these vehicles, 67.5 percent are commercial, 18.4 percent private, and 14.3 percent government owned.

For the best operation and contribution to the economy, the nation's mass transportation fleet of vehicles -- buses, street cars, jitnies, and taxis -- must be used to the fullest extent. Since 1954, city bus passengers have increased 387 percent while vehicles have increased only 53 percent, inter-city passengers increased 151 percent with a vehicle increase of 59 percent, and truck tonnage has made a tremendous spurt of 447 percent since 1954.

The fastest growing part of the national economy is the field of highway improvement. More than 300 miles of highway have been rebuilt and paved, scores of city streets have been widened and paved, and more than 2,000 km of secondary non-paved provincial and national roads have been improved as the public works programs strive to keep pace with the demands of its users.

The American assistance program long ago recognized the importance of rehabilitating the nation's mass transportation system. Equipment and material imported from the U.S. have supported Korea's developing transportation system:

-- 64 streetcars and large supplies of repair and replacement spare parts for urban transport systems in Pusan and Seoul;

-- 332 pieces of heavy construction equipment costing about \$4 million in aid funds;

-- technical assistance to the highway section of the Ministry of Transportation for improvement of operation and maintenance of public transportation and the development of traffic surveys throughout Korea;

-- Approximately 40 modern traffic signals financed by U.S. aid help move vehicles and pedestrians quickly and safely in congested cities, including Seoul, Pusan, Kwangju, Taegu, Taejon, Inchon, Chunchon, Suwon, and Wonju;

-- Hundreds of buses built on surplus U.S. Army truck chassis operate in urban and rural areas;

-- Technical assistance to devise ways and means of conserving and ensuring better utilization of the nation's limited fuel supplies, including dieselization of trucks and buses and conversion of many inefficient taxis to eight-passenger jitney cabs operating over a fixed route like a bus

-- Nation-wide safety campaigns to combat increased highway and street accidents as a result of the steady growth of traffic; and

-- Assistance towards the development of a national law requiring every vehicle carrying paying passengers to take out insurance covering public liability and property damage.

The burden of transporting workers, pleasure-seekers, and farm and factory production rests on the nation's mass transportation system. Long-range programs are being developed by the ROK Government with the advice and assistance of the American aid program to ensure the smooth flow of people and goods in step with the nation's developing economy.

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AMERICAN AID PROGRAM PROJECTS

IN KOREA

1960

ADULT EXTENSION CLUBS:

Kyonggi-do	196
Kangwon-do	196
Chungchong-pukto	195
Chungchong-namdo	105
Cholla-pukto	348
Cholla-namdo	316
Kyongsang-pukto	383
Kyongsang-namdo	234
Cheju-do	65
	<u>2,538</u>

4-H CLUBS:

Kyonggi-do	810
Kangwon-do	487
Chungchong-pukto	794
Chungchong-namdo	1,136
Cholla-pukto	613
Cholla-namdo	880
Kyongsang-pukto	1,075
Kyongsang-namdo	858
Cheju-do	153
	<u>6,806</u>

LIME-PHOSPHATE DEMONSTRATIONS:

Kyonggi-do	7,580
Kangwon-do	4,910
Chungchong-pukto	5,550
Chungchong-namdo	7,660
Cholla-pukto	7,880
Cholla-namdo	10,720
Kyongsang-pukto	12,450
Kyongsang-namdo	11,150
Cheju-do	1,000
	<u>68,900</u>

FARM COOPERATIVES:

Special City of Seoul	37
Kyonggi-do	2,017
Kangwon-do	1,136
Chungchong-pukto	1,458
Chungchong-namdo	2,132
Cholla-pukto	1,769
Cholla-namdo	3,774
Kyongsang-pukto	3,624
Kyongsang-namdo	2,497
Cheju-do	155
	<u>18,599</u>

IRRIGATION:

Special City of Seoul	2
Kyonggi-do	16
Kangwon-do	15
Chungchong-pukto	22
Chungchong-namdo	24
Cholla-pukto	32
Cholla-namdo	47
Kyongsang-pukto	40
Kyongsang-namdo	30
Cheju-do	3
	<u>231</u>

WATER AND SANITATION FACILITIES:

	<u>Public Wells</u>	<u>City Bathhouses</u>	<u>Rural Bathhouses</u>	<u>Public Toilets</u>
Special City of Seoul	870	2	-	66
Kyonggi-do	2,365	19	553	85
Kangwon-do	1,672	9	252	48
Chungchong-pukto	1,568	12	335	33
Chungchong-namdo	2,209	15	327	66
Cholla-pukto	2,467	13	320	65
Cholla-namdo	2,347	16	375	85
Kyongsang-pukto	2,368	16	381	88
Kyongsang-namdo	2,355	23	392	96
Cheju-do	536	5	90	8
	<u>18,757</u>	<u>130</u>	<u>3,025</u>	<u>640</u>

PUBLIC HEALTH FACILITIES:

Special City of Seoul	6
Kyonggi-do	3
Kangwon-do	3
Chungchong-pukto	2
Chungchong-namdo	1
Cholla-pukto	5
Cholla-namdo	3
Kyongsang-pukto	3
Kyongsang-namdo	5
Cheju-do	1
	<u>32</u>

ASSIMILATION AND RESETTLEMENT COMMUNITIES:

Special City of Seoul	63
Kyonggi-do	172
Kangwon-do	20
Chungchong-pukto	67
Chungchong-namdo	115
Cholla-pukto	177
Cholla-namdo	154
Kyongsang-pukto	193
Kyongsang-namdo	515
Cheju-do	175
	<u>1,651</u>

WELFARE INSTRUCTIONS:

Special City of Seoul	8
Kyonggi-do	4
Chungchong-namdo	1
Cholla-namdo	3
Kyongsang-namdo	2
	<u>18</u>

FARM PRODUCTION LOANS:

Special City of Seoul	43
Kyonggi-do	30,596
Kangwon-do	12,103
Chungchong-pukto	12,831
Chungchong-namdo	31,395
Cholla-pukto	30,800
Cholla-namdo	40,874
Kyongsang-pukto	25,399
Kyongsang-namdo	30,308
Cheju-do	943
	<u>215,292</u>

COAL AND METALS:

Kyonggi-do	1
Kangwon-do	7
Chungchong-pukto	1
Chungchong-namdo	2
Cholla-pukto	2
Cholla-namdo	2
Kyongsang-pukto	2
Kyongsang-namdo	1
	<u>18</u>

INDUSTRIAL:

Special City of Seoul	80
Kyonggi-do	22
Kangwon-do	6
Chungchong-pukto	6
Chungchong-namdo	6
Cholla-pukto	8
Cholla-namdo	8
Kyongsang-pukto	15
Kyongsang-namdo	39
	<u>190</u>

COMMUNICATION:

Special City of Seoul	13
Kyonggi-do	5
Kangwon-do	8
Chungchong-pukto	6
Chungchong-namdo	5
Cholla-pukto	5
Cholla-namdo	15
Kyongsang-pukto	9
Kyongsang-namdo	12
Cheju-do	2
	<u>68</u>

PUBLIC WORKS:

Special City of Seoul	116
Kyonggi-do	176
Kangwon-do	113
Chungchong-pukto	97
Chungchong-namdo	131
Cholla-pukto	99
Cholla-namdo	119
Kyongsang-pukto	160
Kyongsang-namdo	196
Cheju-do	24
	<u>1,231</u>

CLASSROOM CONSTRUCTION:

Special City of Seoul	203
Kyonggi-do	152
Kangwon-do	189
Chungchong-pukto	169
Chungchong-namdo	215
Cholla-pukto	225
Cholla-namdo	260
Kyongsang-pukto	419
Kyongsang-namdo	562
Cheju-do	194
	<u>2,688</u>

COMMUNITY DEVELOPMENT VILLAGES:

Special City of Seoul	2
Kyonggi-do	34
Kangwon-do	36
Chungchong-pukto	24
Chungchong-namdo	34
Cholla-pukto	26
Cholla-namdo	30
Kyongsang-pukto	30
Kyongsang-namdo	34
Cheju-do	30
	<u>380</u>

CLASSROOM CONSTRUCTION:

Special City of Seoul	203
Kyonggi-do	152
Kangwon-do	189
Chungchong-pukto	169
Chungchong-namdo	215
Cholla-pukto	225
Cholla-namdo	360
Kyongsang-pukto	419
Kyongsang-namdo	562
Cheju-do	194

2,688