



**Directorate of
Intelligence**

Secret



25X1

North Korea: A New Direction in Economic Policy



25X1

An Intelligence Assessment

NGA Review Complete

Secret

*EA 83-10010
January 1983*

Copy

310

Page Denied



**Directorate of
Intelligence**

Secret



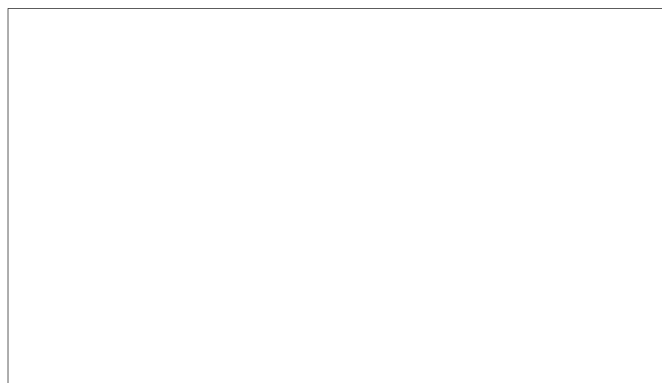
25X1

North Korea: A New Direction in Economic Policy



25X1

An Intelligence Assessment



25X1

Secret
EA 83-10010
January 1983

Secret

25X1

**North Korea:
A New Direction
in Economic Policy**

25X1

Summary

*Information available
as of 11 January 1983
was used in this report.*

Following several years of slow economic growth, North Korea has been forced to adopt a more inward-looking development policy aimed at revitalizing its economy by the late 1980s. The policy also appears intended to enable the North to maintain military spending at a high level. Kim Il-song's son and heir, Kim Chong-il, is closely identified with the new economic strategy, and prospects for his smooth succession will be affected by the success or failure of the ambitious projects now being initiated.

The overall thrust of the new strategy differs markedly from that of the 1970s, when the North focused on obtaining whole plants and advanced Western technology to boost its industrial development. The leadership remains interested in acquiring Western technology but is placing greater priority on using indigenously produced equipment to develop the country's infrastructure.

25X1

In shifting emphasis from import-led industrial development to infrastructure projects fueled by domestic investment, the regime to a large extent is making a virtue of necessity. Since it first defaulted on \$1.6 billion in debts to the West in the mid-1970s, the North has failed repeatedly to meet subsequent rescheduling agreements and remains unable to obtain financing for the purchase of whole plants. Besides conserving scarce hard currency, the new program has other advantages:

- A balance between agricultural and industrial development would be restored.
- Agricultural improvements should eventually pay off in increased export earnings and perhaps in a higher standard of living.
- Improvement in electric power and transportation would facilitate a resumption of industrial growth in the late 1980s.

25X1

The North will not achieve its ambitious goals, but in optimum circumstances it could make substantial progress. In the near term, however, the new policy could mean continued sluggish economic growth because of the slow return on investments in infrastructure. Under adverse circumstances, there is a clear risk of sustained negative growth. And there are other disadvantages:

- The gap in industrial modernization between the North and South will widen during the 1980s.
- The policy does not directly address the problem of reestablishing access to credit.

25X1

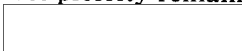
Secret

EA 83-10010
January 1983

Secret



25X1

Whatever the course of economic events over the next few years, we believe the North will resist cutting the level of military spending as a solution to economic problems. Continuing expansion of military factories strongly suggests that the North's first priority remains maintaining its military advantage over the South. 

25X1

Secret

Secret

25X1

**North Korea:
A New Direction
in Economic Policy**

25X1

The Failure of Import-Led Industrial Development

North Korea's real GNP grew in excess of 10 percent annually during 1971-75, largely as a result of purchases on credit of whole plants, advanced technology, and materials for current production from Western industrial countries. In the mid-1970s, however, North Korea became the first Communist country to default on its debt—estimated at about \$1.6 billion. A variety of factors contributed to the default:

- The inexperience of North Korean foreign trade and bank officials.
- Delayed completion of export-enhancing projects.
- Unforeseen imports because of poor grain harvests.
- The softening of world prices for ferrous and nonferrous metals—the North's principal exports to the West.

As a result of default, trade contracted sharply, and the economy suffered a recession during 1976-77. In 1978 the economy bounced back with the long-delayed completion of a number of new factories. Since then economic growth has been slow, averaging about 3 percent per year. Real per capita GNP appears not to have grown at all.

The government has attempted to cope with default and the resulting credit embargo by emphasizing exports to earn hard currency. We estimate the value of total exports reached \$2 billion in 1980, nearly triple the level in 1977. North Korean arms sales, in particular, boomed during 1979-80—totaling \$570 million, nearly a 500-percent increase over the previous two years.

A substantial increase in hard currency earnings in the late 1970s enabled North Korea to meet the tough "cash and carry" terms Western suppliers demanded. Expenditures have shifted from industrial machinery

Table

North Korea: Major Targets for the 1980s

	1977 (Actual)	1984 (Plan)	1990 (Plan)
Electric power (thousand megawatt hours)	20	56-20	100
Coal (million metric tons)	40	70-80	120
Steel (million metric tons)	2.7	7.4-8.0	15
Nonferrous metals (thousand metric tons)	200 ^a	1,000	1,500
Cement (million metric tons)	6	12-13	20
Chemical fertilizer (million metric tons)	3	5	7
Textiles (million square meters)	450 ^a	800	1,500
Grain (million metric tons) ^b	8.5	10	15
Tideland reclamation (thousand hectares)	NA	100	300 ^c
Aquatic products (million metric tons)	1.6	3.5	5.0

^a CIA estimate.

^b Official estimate that includes rice on an unhusked basis; grain also probably includes soybeans and potatoes at full weight.

^c Includes 100,000 hectares to be reclaimed by 1984.

to agricultural chemicals and trucks, the latter to improve civil and military transport. North Korea's continued bad credit rating has prevented major purchases of whole plants.

By the end of 1980, the North had managed to reschedule nearly three-fourths of its hard currency debt. Perhaps anticipating some success in reestablishing access to credit, the leadership announced ambitious long-term economic goals at the party congress in late 1980 (see table).

25X1

Secret

Figure 1
North Korea: Major Development Projects



25X1

505522 (546979) 1-83

Secret

Secret

New problems soon arose, however, including production slowdowns, declining exports, and costly imports of Iranian oil, all of which prevented accumulation of enough hard currency reserves to service the debt. In early 1981, North Korea again defaulted; payments continue only to Japan, the country the regime apparently believes is its best source of essential industrial assistance. The collapse of rescheduling in early 1981 effectively eliminated prospects of acquiring expensive Western plants and technology in time to support the 1978-84 Seven-Year Plan and placed longer term goals in jeopardy. [redacted]

Shift in Development Strategy

As a result of these failures, the North Korean leadership has significantly shifted its economic development strategy. Kim Il-song articulated the new approach in a speech on 14 April 1982 to an audience that included many high-level foreign officials in P'yongyang to celebrate his 70th birthday. Before and after delivery, the North Korean press billed Kim's speech as "historic." The text was printed in the May issue of *Kulloja*—the party's monthly journal—and was presented with a headline in a type size previously used only for Kim's speech to the party congress in 1980 and his New Year's Day addresses. Such treatment assured that the party cadre would regard the speech as Kim's mandate to the party for national development in the 1980s. [redacted]

Under the new policy the regime has begun to commit its resources to several vast undertakings intended to add substantially to the economy's infrastructure (see figure 1). Publicized as a "nature-remaking" campaign, the program has three major components:

- Extensive land reclamation in coastal and mountainous areas.
- Numerous new thermal and hydroelectric power plants.
- Major improvements in the transportation system.

Officials view completion of select agricultural and power projects during 1985-88 as a prerequisite for meeting many of the commodity output goals they set for the end of this decade. By deferring many expensive industrialization projects, the new strategy for

long-term development will minimize the foreign exchange costs of economic growth. Machinery requirements will be satisfied mainly by domestic manufacture. Although skilled labor is in short supply, much of the construction work will require little training, and available manpower can be augmented by mobilizing student "volunteers" and military conscripts. [redacted]

25X1

Agriculture Given Priority

Boosting agricultural production is the focal point of the new policy. North Korea has announced that it intends to increase arable land by 25 percent and grain production—mainly rice and corn—by 67 percent by the end of the decade: [redacted]

25X1

- Some 300,000 hectares of agricultural land are to be reclaimed from muddy tidal flats along the country's west coast—one-third by 1984 and the remainder by 1988. Much of the new land will be obtained by building dikes to hold back the Yellow Sea's 9-meter tides. Construction is under way to link nearby island chains to the mainland and to enclose numerous small bays [redacted] 25X1
- Another 200,000 hectares of agricultural land are to be developed by leveling and terracing hilly land in the country's interior (see photo). About half of the land is to be reclaimed by 1984, and the regime probably intends to have the remainder ready by 1988. [redacted] 25X1

25X1

Ambitious objectives for agriculture have surfaced before in North Korea. In October 1976 Kim revealed a "five-point policy for nature remaking" that focused on agriculture. Little was done, however, because the government's first priority was to resolve industrial problems. [redacted] 25X1

[redacted] provincial officials began organizing reclamation offices, establishing training centers, and assigning labor brigades. They also began providing large amounts of explosives, building materials, and earthmoving equipment needed for dams and dikes. [redacted] 25X1

25X1

25X1

Secret

Page Denied



Kim Il-song inspects a terracing project near Kangdong. [redacted]

Korea ©
25X1

Despite North Korea's unfavorable topography and climate and the regime's traditional emphasis on investment in heavy industry, strong gains have been made over the past 25 years in crop and livestock production. Crop production in the North probably doubled in the 1970s and there was also a large increase in livestock production. We attribute much of the increase to four factors:

- Changes in the composition and varieties of crops sown.
- Rapid introduction of mechanized equipment.

- Extensive construction of water impoundments for irrigation.
- Increases in application of chemical fertilizers, herbicides, and pesticides. [redacted]

Grain output has leveled off in the past two years and may even have declined slightly. An official claim of 9.5 million tons for last fall's harvest appears more

25X1

exaggerated than usual. Government officials were uncommonly silent about the size of the 1981 harvest and vaguely characterized the 1980 harvest as the same as in 1979 when they claimed grain production reached 9 million tons. Moreover, agriculture's share of GNP gradually declined during the 1970s because of relatively faster growth in industrial production, especially in the early part of the decade. [redacted]

The new stress on agriculture will restore some balance to sectoral development. Agriculture, for example, provides much of the raw material for light industry. Greater agricultural output also can contribute to improving diets and general consumer welfare and provide exports marketable in the West for hard currency. [redacted]

Ambitious Plans for Electric Power

The government's plan to increase electric power is divided in two stages. The regime is pushing hard to complete several projects by the mid-1980s to ease a power shortage that is restricting industrial production. For several years, the supply of electric power has fallen seriously short of demand. Voltage fluctuation is common, and outages are frequent, especially in winter. Consequently, electrical machinery operates inefficiently and suffers more wear. Electric power bottlenecks affect factories in the northeastern industrial zone, in particular when drought forces many hydroelectric plants to reduce their load or to go off line. The national power grid is inadequately developed; thermal power plants, mainly located in the west-central region, are too few and inefficient to provide relief at critical times. [redacted]

The second stage calls for power output to be expanded to 100,000 megawatt hours (MWh) by the end of the 1980s. This goal exceeds any possible increase we can foresee in the demand for electric power. To reach this target, the North Korean press has stated that installed capacity is to grow to 17,000 MW, compared with our estimate of 5,040 MW in 1980. We can break out on a rough basis the composition of the planned increase in capacity by plant type:

- About 5,000 MW are to be added in hydroelectric capacity and 2,000 MW by coal-fired thermal plants.
- Nuclear power is to provide 3,000 MW.

- Tidal power plants probably are forecast at about 1,000 MW.
- Small plants will provide the remainder—about 750 to 800 MW. [redacted]

25X1

We can identify 12 hydroelectric and nine thermal plants under construction or in the planning stage. Three of the largest projects under way in the North are the T'aech'on, Poch'on-bo, and T'onghch'on hydroelectric power plants:

25X1

- A large dam and hydroelectric power plant—probably in the 400- to 700-MW class—are under construction on the Taeryong River near T'aech'on [redacted]. Adjacent rivers that flow northwest into the Yalu River are to be dammed and diverted to the Taeryong. This project is scheduled to be completed by 1985.
- An even larger and more difficult task will be construction of the 1,000-MW plant at Poch'on-bo in the northeast. Kim recently resurrected this project which was first surveyed over 20 years ago. Five rivers will be rerouted to provide sufficient hydraulic power.

25X1

25X1

25X1

- The same technique will be used to power the T'onghch'on plant that is planned for the Wonsan area on the east coast; its construction calls for rerouting the Imjin and Pukhan Rivers, which suggests a minimum capacity of 400 MW. [redacted]

25X1

25X1

The focus on hydroelectric power is a switch from recent emphasis on constructing thermal plants. Kim began stressing thermal power in the mid-1970s when drought demonstrated the vulnerability of hydro-power. We calculate that by the end of the 1970s thermal plants had accounted for about 44 percent of capacity. [redacted]

25X1

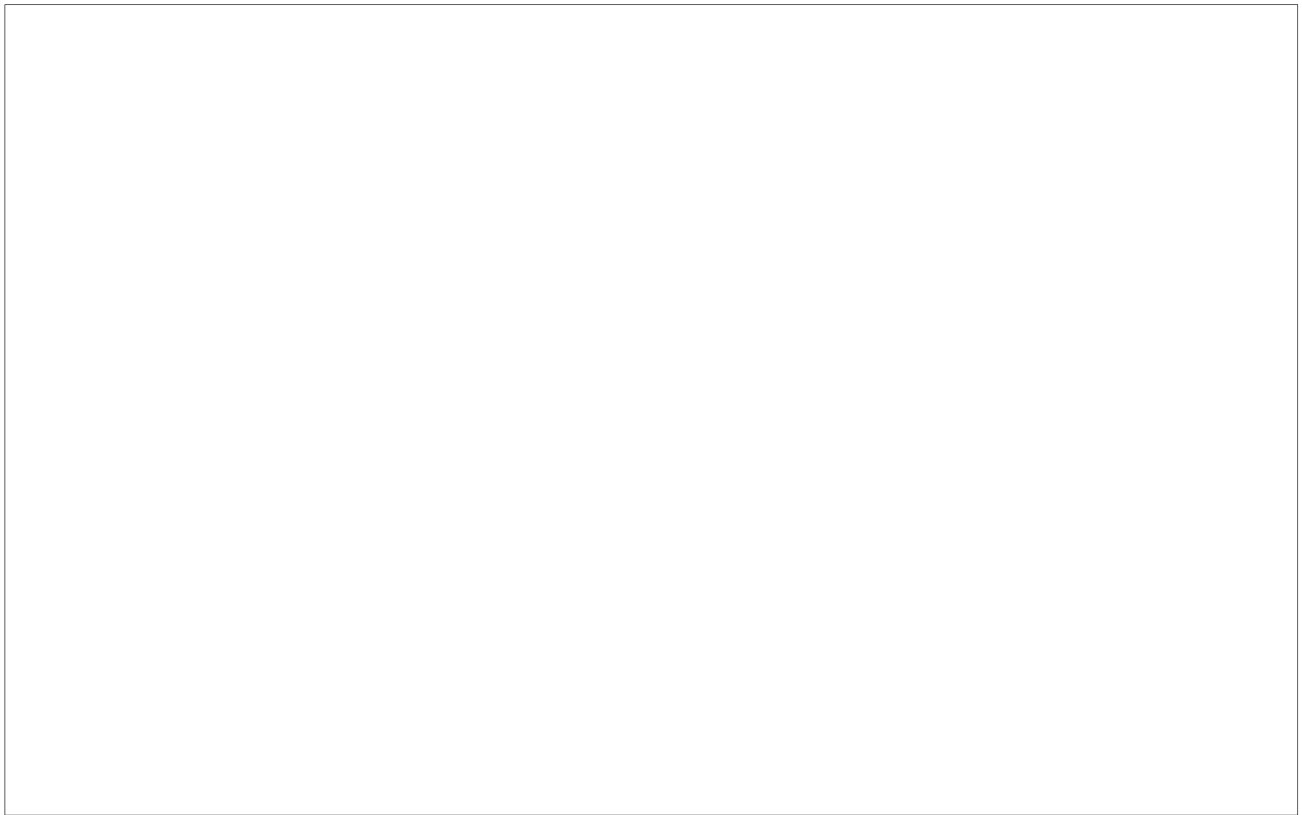
25X1

Several factors may have influenced Kim's decision to resume concentrating on hydroelectric power. More than half of the country's water power potential—roughly totaling 8,000 MW—remains to be tapped.

25X1

25X1

25X1



North Korea has the construction capabilities to build dams and hydropower plants. If necessary, it can outfit hydroplants with domestically produced machinery. Conversely, North Korea does not have a capability to construct large, efficient thermal plants, although it is developing a capability to equip medium-scale plants. All existing plants were built with foreign assistance and equipment—mainly of Soviet, West German, and Austrian origin. Moreover, in recent years, coal supply has become a problem at large thermal plants. [redacted]

We believe the North is strongly interested in developing nuclear power because of its desire to match the South in this field. [redacted]

[redacted] chances of obtaining a nuclear power plant are slim until the debt problem is solved but, nonetheless, will continue to press its Communist allies and potential Western suppliers. [redacted]

Tidal plants represent a partial alternative for additional power output. An experimental plant—roughly 10 MW in size—has been built on the Taedong River near Namp'o. According to a Soviet press report, the North Koreans plan to build a 160-MW plant in this vicinity. [redacted]

The regime appears to view development of small plants, independent of the national grid, as an interim measure to ease constraints until major additions to capacity are completed. On Kim's instruction, provincial authorities are constructing a number of small hydroplants—ranging from 25- to 500-kilowatt (kW) capacity—to serve the needs of farms, local light industry, and perhaps villages. Kim also has directed

25X1

25X1

25X1

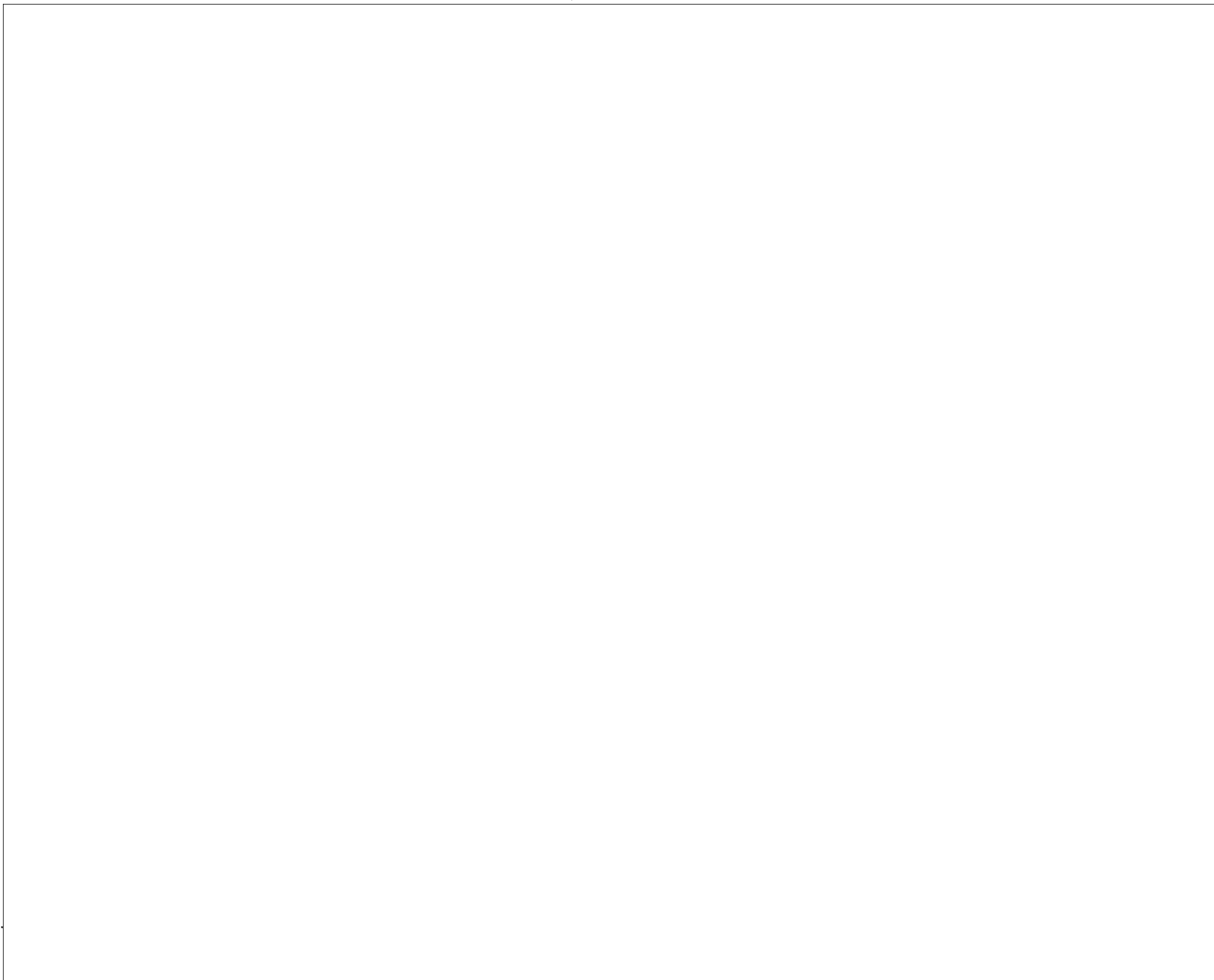
25X1

25X1

25X1

Secret

25X1



factories to build medium-size, dedicated thermal power plants and has encouraged cogeneration projects where possible. [redacted]

railroad and may include a hydroelectric power plant. Kim specified that the Namp'o lock-gate should be finished by 1985. [redacted]

25X1

Transportation Nets Expanding

North Korean economic plans have stressed the need for improvements in transportation since the mid-1970s but the goals for the 1980s are even more ambitious. For example, the keystone of the effort to improve transport systems on the west coast is an 8-kilometer-long dam and lock-gate that is being built on the Taedong River below Namp'o [redacted]. In addition to incorporating several locks for oceangoing shipping, the dam will be topped by a highway and

By raising and stabilizing the level of the Taedong River, the Namp'o lock-gate will enable larger ships to call, while other port improvements will reduce turnaround time. Port expansion at Namp'o and Songnim is specifically intended to ease constraints on export shipments. The North probably intends to increase the number of warehouses, improve cargo

25X1

25X1

Secret

25X1

handling, and lengthen quays. The Namp'o lock-gate and T'aech'on Dam also will provide large fresh water reservoirs to irrigate reclaimed farmland and support industrial and residential expansion in the Namp'o area. [redacted]

The Namp'o lock-gate will mark the western limit of a Taedong River canal that is to extend from Chaeryong in the south to Tokch'on in the north. To improve the navigability of the Taedong River and control flooding, a lock-gate dam was completed last year above P'yongyang near Mirim, and its twin is under construction farther up river near Maekchon [redacted]

Each dam incorporates a medium-size hydroelectric power plant and is topped by a road and pierced by a tunnel. [redacted]

The coastal highway and railway being built in conjunction with the Namp'o lock-gate will provide needed links to Hwanghae-namdo (South Hwanghae) Province—an important rice-growing region—and cut hours off the transit from there to road and rail hubs in P'yongyang. These expansions, particularly of rail service, also will aid in shipping cargo to and from the Namp'o port. [redacted]

To date, the North's most successful program to improve internal transport has been the electrification of its rail lines, the backbone of the system. By the end of 1981, it had already achieved 70 percent of its plan to electrify 1,600 kilometers of track during 1978-84. [redacted]

The road system is relatively poor, especially east-west routes, and is likely to be upgraded. In the 1970s, a major highway was constructed linking Namp'o, P'yongyang, and Wonsan. In the 1980s, the North is likely to develop its secondary road net to improve connections between industrial centers in the east and west and to give better access to more remotely located plants. Over the past several years, a number of concrete bridges were built that are superior to the roads they serve. We believe the regime intends to widen, grade, and perhaps surface these roads during the next few years so they can also be used during bad weather. [redacted]

The improved transport network will include new rail, road, bridge, and tunnel links that will speed the transit of military forces and supplies from the capital area to the forward corps. Changes to the coastline and water depths could affect North Korea's defense arrangements; reclamation of swampy areas, for example, could facilitate military movement and provide areas to construct airfields, barracks, and defensive positions. [redacted]

Supporting Role for Industry

In the near term, industry is concentrating on providing earthmoving equipment, construction materials, and explosives for land reclamation and building dams and dikes. [redacted]

[redacted] one of the country's major civilian shipyards at Namp'o has been converted from construction of cargo ships in the 20,000-ton class to assembly of cylindrical steel caissons for the nearby lock-gate [redacted]

To assist in attaining the agricultural targets, efforts are being made to double the production of chemical fertilizers. We believe the regime also will try to boost the supply of tractors and other farm machinery. Irrigation projects will require more plastic pipe and electric pumps. [redacted]

Industrial support for the electric-power sector includes the manufacture of generators and turbines. The Taean Electrical Machinery Plant has produced 50,000-kW generators for hydroelectric plants for several years and now is trying to assemble generators twice that size. Within the past year it also began to produce 50,000-kW generators for thermal plants; larger units, however, probably are beyond its current technical capability. In addition, plans call for more and better machinery to mine coal for thermal power. Because much of its coal is a powdery anthracite, the North is attempting to develop technology to burn it instead of depending on steam coal. A 150-MW thermal plant being built with Soviet assistance at Ch'ongjin reportedly incorporates some new technology in this area. [redacted]

Page Denied

Next 1 Page(s) In Document Denied

The major push in manufacturing transportation equipment is likely to continue. Shortages of electric locomotives and railcars persist and result at times in bottlenecks. Civilian shipbuilding also will be pursued, but with less emphasis on cargo vessels. [redacted]

Although the new development strategy will defer most industrial production goals for a time, Kim has indicated some important exceptions. The North is accelerating its efforts to raise output of nonferrous metals and is seeking to increase its iron- and steel-making capacity by the mid-1980s. Besides meeting domestic demand, these metals are important for satisfying growing export commitments [redacted]

Trade: A Secondary Source

Some changes in North Korean trade policy have accompanied the shift in development strategy. Beginning in the late 1970s, Kim stressed the need to increase exports in order to increase earnings, boost import capability, and solve the problem of default. We believe that pressures on enterprises to produce for export will continue for the time being. The North's priority trade goals, however, are changing; it now needs a variety of imports to support the new infrastructure policy, including earthmoving equipment and dredges for construction projects and large (100,000 MW), efficient generators and turbines for power plants. [redacted]

A change in the direction of trade has already begun. The North has shifted export priorities to bilateral trade with the USSR and China at the expense of exports to the industrial West. The North is attempting to soothe strains resulting from its export shortfalls to the Soviets, in particular in 1981, and to secure sufficient deliveries of such critical commodities as crude oil and coke. [redacted]

To offset any political leverage that could accompany greater dependence on Communist suppliers, we expect that the North will continue to seek to expand trade with nonaligned countries. By the mid-to-late 1980s we believe that the reduced foreign exchange requirements of the new policy and increasing domestic demand for building materials and other basic industrial products will result in a declining emphasis on exports. [redacted]

Prospects

Uncertainty and Risk in the Near Term. The new development strategy significantly increases the risk over the next few years that even relatively minor economic problems could result in major setbacks. With investment tied up in long-term infrastructure projects and heavy outlays for the military continuing, economic vulnerability will be heightened. Persisting hard currency shortages will compound the difficulty of offsetting drought, higher import prices, fuel shortages, or production shortfalls. [redacted]

Economic growth in 1982 may have been slightly negative, and we expect North Korea will close out its current Seven-Year Plan in 1984 little better off than when it began. Adverse trade trends that appeared in late 1980, and the regime's inability to reverse them, are a primary cause for diminished prospects. Energy and hard currency shortages are putting increasingly tight restraints on output. [redacted] many factories operate for extended periods at one-third to one-half capacity [redacted]

A pickup in world demand for North Korea's chief exports—steel, nonferrous metals, gold, silver, construction materials, and conventional weapons—would brighten the near-term outlook a little. But the North would have to restructure priorities to take maximum advantage of increased international demand. More important, further weakening of demand for North Korean products could drive the economy into recession. Unlike the recession of the mid-1970s, recovery would not come quickly because there would be no backlog of nearly completed plants to increase output. [redacted]

Potential Gains in the Longer Term. Goals for the new plan are set so high that North Korea need not obtain them fully to derive some benefit. Although each individual project is within the nation's capability, we believe that the aggregate will overtax resources. We expect the timetable to slip badly, even with no recession. [redacted]

Agricultural output is unlikely to exhibit any sharp increase in growth until several years after new lands are reclaimed. Moreover, we tentatively judge that at

25X1

25X1

25X1

25X1

25X1

25X1

25X1

25X1

25X1

25X1

25X1

Secret

25X1

best no more than 300,000 hectares will be newly cultivated by the end of the decade—including 100,000 hectares of tidal land and 200,000 hectares of hilly land. We believe the project to build a long dike in the West Sea—where much of the tidal land is to be recovered—is too vast an undertaking for the time allowed. [redacted]

The productivity of the reclaimed land initially will fall below the national average. After draining, tidal lands will contain large amounts of residual salts that must be leached from the soil; after terracing, hilly lands will have only a thin covering of top soil. We do not consider labor shortages to be a major constraint on working the new land into the agricultural system, although some temporary labor problems may occur—because new lands probably will be added irregularly and in large parcels. [redacted]

Viewing past crop performance, we doubt that the planned increase in yields is attainable. The regime's capability to more than double fertilizer production is questionable, and even if it does, crop response rates are likely to diminish with increases in application. As a result, we expect harvests will rise by no more than half the amount planned. [redacted]

The outlook is better for increasing power production. A small increase in supply probably will be achieved in the next few years, and substantial growth can be expected by the end of the decade when several large hydroelectric plants should be completed. [redacted]

The development of various power sources will be uneven. Although the North may be relatively successful in developing hydroelectric power, the amount of foreign assistance required to double thermal capacity puts such a goal out of reach. Nuclear power will be unattainable for some time. The USSR repeatedly has refused requests for assistance. [redacted]

[redacted] Approaches to suppliers in the West never have advanced beyond exploratory discussion. North

Korea is continuing its nuclear research, but has not demonstrated the engineering and manufacturing capabilities to construct a plant on its own. [redacted]

With a great deal of effort and expense, the North may double rather than almost quadruple its electric power capacity by the end of the decade. Actual power output will not increase as much because of aging equipment in many older plants and difficulties in replacing machinery. Overall, the increase in power production should more than satisfy increases in demand. [redacted]

In the transportation sector, the most significant gains are likely to be in the rail system; electrification should be completed during the 1980s. A modest upgrading of road networks and port facilities is likely, but highways connecting industrial areas on the east and west coasts will probably remain inadequate. Shortages of transportation equipment, particularly locomotives, railcars, trucks, and merchant ships, will prevent the North from fully utilizing the improvements to infrastructure. [redacted]

Implications

North Korea's new development policy may affect other national objectives of interest to the United States, including:

- A continued high level of military spending: Despite the large investment required to carry out the infrastructure buildup, we can detect no reduction in the North's level of military spending or in the priority assigned military objectives, such as naval versus civilian shipbuilding. Indeed, the continuing increases in North Korean defense production, investment in new military plants, and qualitative improvements in its armed forces strongly suggest the North intends to maintain its military advantage over the South. In the longer term, a stronger infrastructure could greatly facilitate the North's ability to maintain heavy defense outlays in the 1990s.

25X1

25X1

25X1

Secret

Secret

- An orderly transition to new leadership: The prospects for a smooth succession and a full consolidation of power by Kim Il-song's son, Kim Chong-il, could be affected since the younger Kim is being closely identified with the new development policy.
- An improved standard of living: Kim Il-song has recently emphasized the need to increase consumer welfare as an incentive for higher labor productivity. The infrastructure buildup and continued spending on the military, however, leave little margin for improving civilian levels of consumption in the 1980s.

25X1

The North's recognition of the linkages among these political, economic, and military objectives may help explain the large scale of the various projects now under way and the intensity with which they are being pursued.

25X1

Secret

Secret

Approved For Release 2008/07/21 : CIA-RDP84S00553R000100030005-1

Secret

Approved For Release 2008/07/21 : CIA-RDP84S00553R000100030005-1