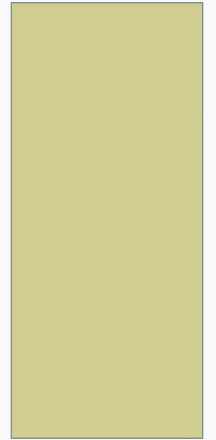


THE NORTH KOREAN FAMINE

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NORTH KOREAN AGRICULTURE

- After collectivization and reorganization of the countryside into cooperative farms in 1954-8 (one for each village in 1961) the DPRK concentrated on development of intensive, industrial agriculture
 - Expectation that pooling of land and labor would be more efficient, and consolidated fields would be easier to mechanize
 - Self-sufficiency in agriculture was a primary goal
 - Initially in the 1960s: irrigation, electrification, and mechanization
 - By the 1970s most land was being plowed by tractors run by county farm machinery stations 농기계 작업반
 - Production of grains grew rapidly in the fifties and early sixties, but leveled off as new land available for cultivation declined

KIS 1964: THESES ON THE SOCIALIST RURAL QUESTION IN OUR COUNTRY

- Emphasized technical, cultural and ideological revolutions
 - Peasants are backward and need to be brought up to urban standards
 - Ideological revolution is most important
- Emphasized working-class leadership of the peasantry
 - i.e. leadership and assistance by the Party and state
- Emphasized guidance and management of agriculture
 - “steadily bringing the method of management in the agricultural cooperative economy closer to the more advanced method of management of industrial enterprises”
 - This involves “intensive technical guidance in production and the planning and systemization of all management work in an enterprise”

MODE OF DISTRIBUTION

- From total harvest subtract
 - Taxes, seed, fertilizer, feed and other production costs
 - 15-30% to community savings funds
 - 3-7% to sociocultural fund
 - (peasants got distributed about 30% of the harvest according to accumulated work days)
- 1960 new incentives
 - Farms keep the output in excess of 90% of their team target (quota)

ACHIEVEMENTS IN AGRICULTURE

- Emphasis on irrigation, mechanization, intensive use of agro-chemicals (“chemicalization”), development of hybrid seeds, and rural electrification
 - Rural investment in power, irrigation, and reclamation of new farmland
 - Rural electrification completed by 1974
 - By 1977 70% of plowing was being done by tractor
 - Irrigation increased 6-fold 1954-1988
 - Heavy inputs of fertilizer, herbicide, and insecticide
 - Agricultural infrastructure to develop hybrid seeds responsive to irrigation and fertilizer
 - By mid-1970s caloric intake per capita was adequate and comparable to South Korea

MANAGEMENT OF COLLECTIVE FARMS

- Every July the KWP and State Council pass down the agricultural production plan to provinces, cities, and counties—who then pass it on to collective farms
 - Planned production always exceeds actual production
 - Work teams cannot change mix of crops or other inputs assigned to them
- 1965 work teams reduced in size and work days changed to a piece rate system
 - Surpluses bought by state at low prices
 - Penalties reduced income in bad years
- 10% of farm members are management who don't do field labor, but get work day distributions

INTERDEPENDENCE OF AGRICULTURE, ENERGY, AND INDUSTRY

- Agriculture depended on industrial input
 - Production of fertilizers, herbicides, and pesticides required imported raw materials (especially petroleum and potash) and use of large amounts of energy
 - Mechanization required continuous production of new machines and spare parts, as well as fuel to run the machinery
 - Irrigation was not gravity fed, but depended on electric pumping stations to lift water into the fields
 - Up to 1/3 of DPRK electricity went into irrigation systems
 - Inadequate production of coal led peasants to cut trees on the hillsides for fuel, after which KIS suggested in the 1970s that steep slopes be planted in crops

DECLINE OF AGRICULTURE BEGAN IN THE LATE 1980S

- Production of grain peaked in 1984, and then declined (down 20% by 1993)
- Why?
 - Inherent inefficiencies of collective agriculture?
 - But collective agriculture changed little during this period
 - Natural disaster (1994, 1995, 1996, 1997)?
 - Pushed them over the brink, but decline preceded natural disasters
 - Loss of trade with socialist block (1991-1993)?
 - Pushed them over the brink, but decline preceded 1989 dissolution of socialist block
 - Environmental degradation?
 - Over chemicalization can lead to acidification of soil, and loss of humus that creates the soil's natural fertility
 - Deforestation left North Korea vulnerable to flooding and mud slides when heavy rains fall

MODEL OF AGRICULTURAL DECLINE

- 1980s
 - Limits of industrial agricultural model reached
 - Marginal returns on investments in irrigation and chemicalization had reached zero or less
 - Little land available for reclamation
 - Steep slopes were losing their fertility to erosion
- Early 1990s
 - Loss of trade with socialist block was a devastating blow to industry → and then agriculture
 - Loss of imported fuel meant tractors couldn't be run or repaired
 - Shortages of fuel meant electricity for irrigation was inadequate
 - Production of high-quality seed faltered, meaning farmers had to put more seed on the field to get the same production
 - Shortages of imported raw materials (petroleum, potash) hindered production of balanced fertilizers

VICIOUS CYCLE OF DECLINE OF INDUSTRY AND AGRICULTURE

- Lack of petroleum (for mining machines) led to lack of coal
- Lack of coal led to lack of electricity
- Lack of electricity led to lack of irrigation (and fertilizer)
- Lack of petroleum and potash led to lack of fertilizer and fuel for farm machinery
- Lack of fertilizer, machinery (and fuel), seed, irrigation led to falls in productivity
- Fall in natural soil productivity compounded problems

INITIAL POLICY REACTION TO AGRICULTURAL DECLINE

- 1993.12 DPRK admitted that the 3rd Seven-Year Plan had not achieved its goals
- Government reaction
 - Modest reforms
 - Increased scale of private plots from 80 square meters (861 sq. ft. 20 p'yŏng) to 120 square meters (1292 square feet—35 p'yŏng)
 - Frequency and scope of farmer's markets expanded (allowed to trade grain)
 - Intensify traditional agricultural policies
 - Expand acreage seeded in grain (even if not suitable)
 - Shift into more high-yield rice and corn
 - Maximize industrial inputs (when possible)—more fertilizer
 - Intensify double-cropping and dense planting
 - Bring marginal and steeply sloped land into production

WEATHER DISASTERS COMBINED WITH ECOLOGICAL DECLINE

- 1994 Hail storms in No and So Hwanghae
- 1995-6 floods in July/August (monsoon season)
 - Aggravated by deforestation
 - Destroyed crops and irrigation facilities, roads and storage
 - Erosion of hillsides and silting of rivers and irrigation facilities hindered recovery
- 1997 drought
- 1998 weather improvement did not lead to improved crops

Metric tons (millions)

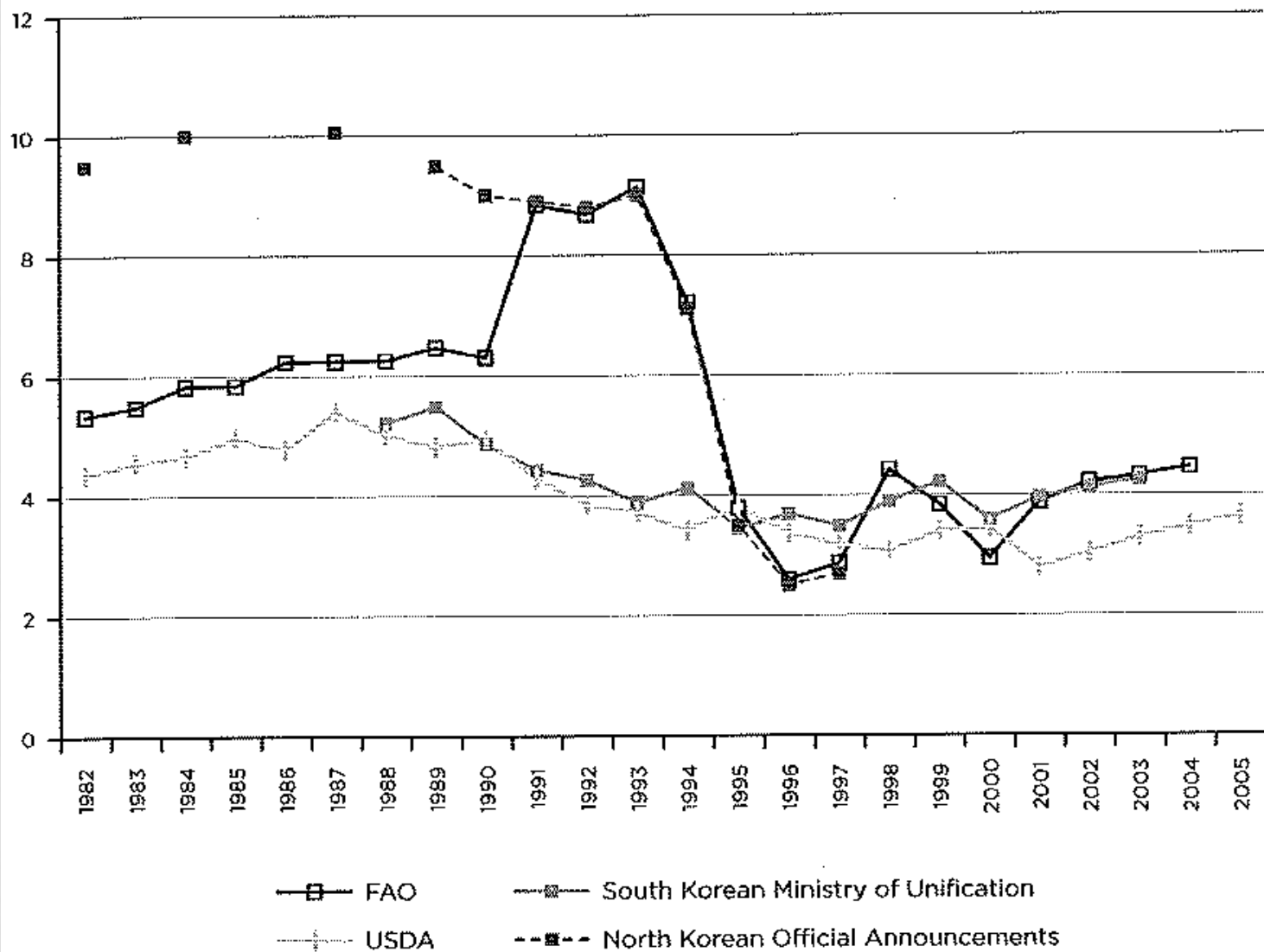


FIGURE 2.3. Estimates of North Korean Grain Production, 1982–2005

Sources: FAOSTAT; USDAFAS; Korean Ministry of Unification: Woo 2004.

WHAT CAUSES FAMINE?

- Famines are more common in authoritarian states than democracies
 - Why? Because in democracies the plight of the foodless sets into motion government and non-governmental organizations that find food elsewhere and provide it to people
 - Commercial food imports
 - International aid
 - Distribution to people who most need it
 - This usually means to people who lack the means to buy food on the market
 - In a centrally planned system with government distribution, however, certain groups may be favored over others

PUBLIC DISTRIBUTION SYSTEM

- Each province (plus P'yŏngyang, Namp'o, and Kaesŏng) has a Food Administration Department
 - Each county has a Food Administration Section and a warehouse that supplies a few institutions directly but otherwise distributes food to local Public Distribution Centers
 - Each PDC serves 1,500-3,000 families
 - County warehouses are controlled by the County People's Committee (Party functionaries and government staff)
 - Rations varied by age, gender, occupation and geographic location
 - PDS prices were highly subsidized so that market prices (when even available) were 300x higher

DIFFERENTIAL PRIVILEGES

- Military, secret police, high ranking bureaucrats, and those engaged in heavy labor had higher rations
- Top ranks got their rations through the Party or special government supplies
- Military has its own, separate distribution system
- State and cooperative farmers retain part of their crop for personal consumption (and have access to private plots)
- PDS thus supplied about 60-70% of the population
 - Children, elderly and disabled had the lowest food priority
 - Prisoners (about 1% of the population) deliberately given little food
 - *Sŏngbun* affects one's success and thus indirectly access to food
 - -family social, political, and occupational background (29 distinct groups grouped into "core, wavering, and hostile classes")

BREAKDOWN OF PDS

- After 1987 when Soviet aid stopped rations cut by 10%
- 1991 “Let’s eat two meals a day” campaign
- 1992 rations cut another 10% and PDS food distributions began to get erratic
- By 1994 almost 64% of people reported erratic distributions and were getting less than half their food from the PDS

UNFOLDING OF FAMINE

- 1994—drop of imports of maize from China and poor harvest in northeast
 - Northeast highly urbanized and thus highly dependent on PDS (Hamhŭng, Ch' ōngjin)
 - Initially tried to squeeze farmers for more grain, but this backfired
 - KJI initially thought peasant “hoarding” was the problem
- Mortality
 - Highest among youngest and oldest
 - About 1/5 of the population elite enough to not be exposed to starvation
 - Most responsible total estimate 600,000 to 1 million deaths with urban areas in the northeast the hardest hit

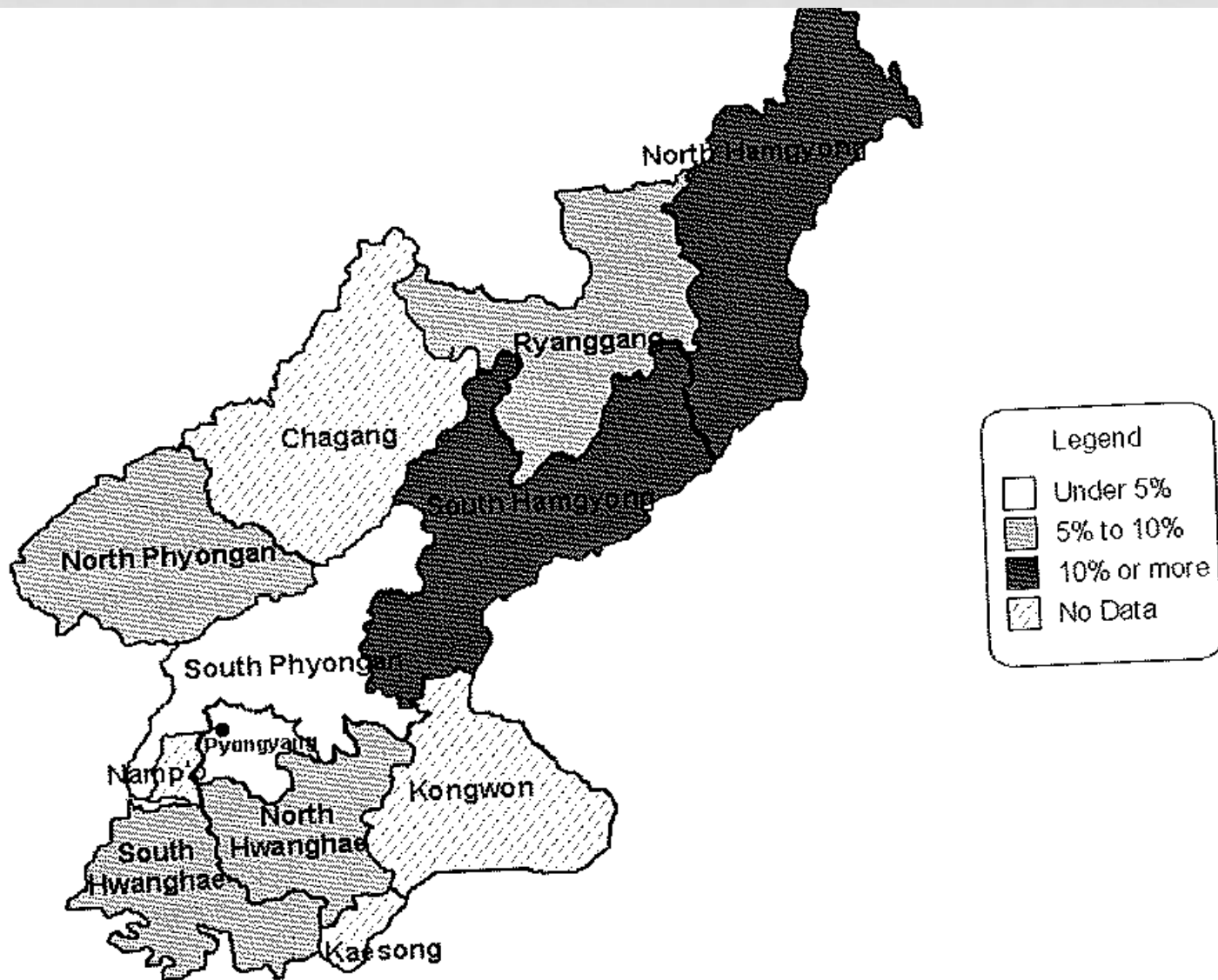
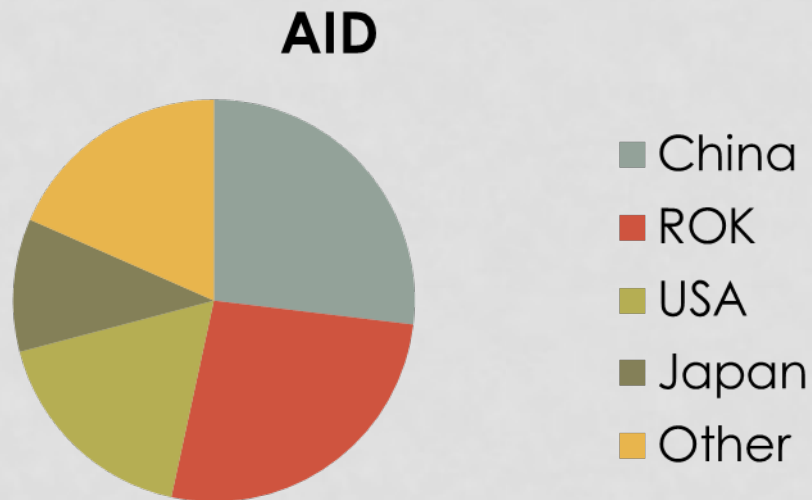


FIGURE 7.7. Wasting
 Source: Central Bureau of Statistics, 2005.

FOREIGN AID

- 1995.8 DPRK made an official request for humanitarian assistance
- Massive aid 1995-2008



WHY DELAYED DPRK RESPONSE?

- Hypothesis 1: US and ROK didn't understand DPRK's nuclear program as “call for help”?
 - Yet DPRK continuously tried to hide the problem
- Hypothesis 2: hardliners and softliners in DPRK couldn't agree
 - Selig Harrison evidence, and KJI's Kimdae speech
- Hypothesis 3: during 1991-2 both KIS and KJI were shielded from knowledge by bureaucrats
 - Oberdorfer says KJI didn't know until Kang Sŏng-san went to him directly in 1993
 - KJI did complain about *yoryŏngjuŭi* (using rough estimates to protect your back) in his Kimdae speech