

Future multilateral cooperation with the DPRK: Food Security and agriculture

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1. Introduction

- 1.1 This report reviews the data on food security and agriculture in the DPRK. It investigates the meaning of the term ‘food security’ as understood by the DPRK government and the United Nations agencies working in the DPRK. The paper reviews the causes and condition of food insecurity in the DPRK. The paper charts the government’s responses to the food and economic crisis of the mid-1990s, before evaluating food security in the DPRK in terms of aggregate national food availability as well as food accessibility by different social groups. The paper also notes the DPRK government’s new approach to moving towards a cooperation strategy with the international community based on development instead of relief. Building on this new approach, the paper proposes a set of recommendations designed to offer a multisectoral approach to reconstituting sustainable food security in the DPRK. In so doing, the paper offers suggestions for possible future multilateral cooperation in the context of food security as a policy goal for the DPRK.
- 1.2 In this paper agriculture is reviewed as an important but not the only important economic sector crucial for developing and maintaining sustainable food security policies.

2. Data

- 2.1 Questions as to the reliability, accuracy and veracity of data have been frequently been a source of controversy in policy and scholarly studies of DPRK economics, society and policy.
- 2.2 Although difficulties continue to exist, by 2005 a relatively large amount of reliable data is available on different aspects of the DPRK economy and society. The most transparent sector of the DPRK economy is agriculture. The availability of reliable data and well-founded analysis is a product of nearly a decade of cooperation between the DPRK government and the international community in the areas of agriculture and food security. The government has worked closely with international organisations, particularly UNDP and IFAD; bilaterally such as with the Swiss and more recently the South Korean government; and with non-governmental organisations, for instance CARITAS-Hong Kong and Concern. Much of this now enormous collection of information, some of which has resulted in detailed reports from agronomists and other technical experts, is publicly available on the website run by the United Nations office for the coordination of Humanitarian assistance (UNOCHA), Reliefweb, at reliefweb.com.
- 2.3 The first significant and still important base data-set and analysis in this sector was the product of cooperation between the government and the UNDP. It can be found in the documentation drawn up jointly by the DPRK government and the UNDP for the round table conferences in 1998 and 2000 on the

- Agriculture Recovery and Environmental Protection (AREP) plan (UNDP, 1998; UNDP, 2000).
- 2.4 Regular updating on agricultural production and food supply and demand figures and analysis appear publicly in the (at least) annual FAO/WFP Crop and Food Supply assessments (also available online). The eight-page section of the 2002 DPRK UN Common Country Assessment on food security is based on a synthesis of the above information (UN, 2003). It represents the consensus across the UN system on the causes and possible solutions to food insecurity in the DPRK.
 - 2.5 ‘Supply’ (from various sources of agricultural commodities) and demand (by the population) data and analysis is found in the FAO/WFP Food and Crop assessments. Further data on the ‘demand’ side of the food security equation can be found in the 1998, 2002 and 2004 nutrition surveys and assessments undertaken jointly by the government with the major multilateral organisations cooperating with the DPRK, ie WFP/UNICEF and the EU. These surveys produced valuable quantitative data on the nutritional status of women and children under seven years of age.
 - 2.6 Data and analysis of food security and agriculture is therefore relatively profuse and relatively uncontroversial, unlike for instance the situation on food aid distribution, where there still remains regular dialogue between the DPRK government and the international organisations as to the transparency of food delivery monitoring and the reliability of food aid distribution data.
 - 2.7 Some criticisms have been made of the FAO data and analysis, largely in respect of the alleged potential overestimation of the FAO of DPRK cereal demand. The FAO is charged with having underestimated the amount of pulses in the historic diet of North Koreans and therefore having overestimated the demand for rice and maize (Smith, Heather, 1998). Even taking this criticism into account, there is little disagreement on the basic issue that the DPRK remains a country with continuing substantial food deficits that will require substantial support from external assistance, if it is to meet the minimum food requirements for all the population.
 - 2.8 In summary, there is a more or less consensus between the DPRK government and external actors, and between external actors, that sufficient information of reliable quality is available such as to enable meaningful and importantly, shared analysis of basic problems and difficulties in this sector.

3. Concepts and analytical framework

- 3.1 There is a shared agreement between the DPRK government and the various agencies of the UN system operating in the DPRK as to what constitutes food security and food insecurity. This was outlined in the DPRK UN Common Country Assessment (CCA) published in February 2003. This joint analysis evolved in cooperation with the DPRK government at steering group and working committee level. It can be considered therefore representative of DPRK and UN understandings of the concepts, condition and causes of food insecurity in the DPRK.

- 3.2 The CCA adopts the 1996 World Food Summit definition of food security. It states that *'Food Security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life.'*
- 3.3 The CCA also makes explicit the idea of food insecurity as *'A situation that exists when people lack secure access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life. It may be caused by the unavailability of food, insufficient purchasing power, inappropriate distribution, or inadequate use of food at the household level.'*
- 3.4 The CCA recognises that some individuals can be particularly vulnerable to food insecurity because of a lack of coping mechanisms, most specifically because of socio-economic factors.
- 3.5 These understandings essentially follow conventional development policy terminology where the concept of food security can be disaggregated into three constituent units. These are national food availability; food accessibility to social groups and individuals; and household and social group vulnerability.
- 3.6 This paper uses the analytical framework provided in the CCA as developed by the DPRK government and UN agencies self-understanding as to what constitutes food security and food insecurity. Vulnerability to harm caused by food insecurity is also discussed in this paper. It should be noted that malnutrition, as one symptom of lack of sufficient and adequate food, is always compounded by non-food related causes, including inadequate and unsafe drinking water, poor medical services, lack of heating in winter and physical exhaustion.
- 3.7 In this paper, food security is analysed at national aggregate level (availability); and social group level (accessibility and vulnerability). Analysis of accessibility and utilization of food at the household level is largely omitted from this paper. This is because there is insufficient reliable data on household food utilization in the DPRK.

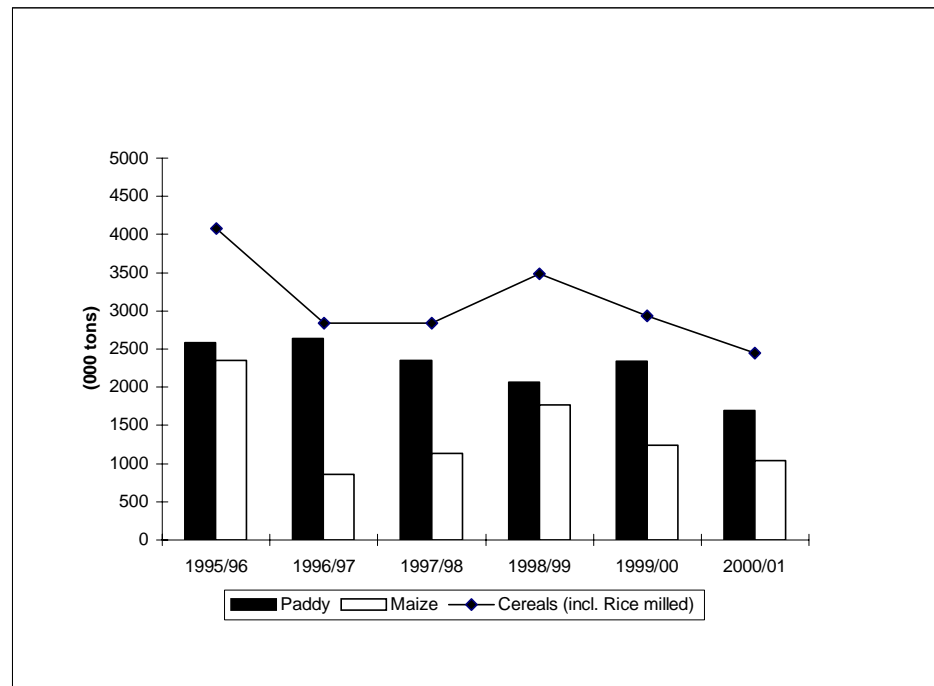
4. Food insecurity in the DPRK: the problems

- 4.1 The causes of the current food insecurity in the DPRK are well-documented and well-known. The rapid ending of preferential trading links with the former Communist countries at the end of the Cold War in 1989 brought an end to concessional oil, chemical and technology imports as well as to the limited markets available for DPRK exports. Lack of adequate hard currency reserves and a history of failures to achieve debt rescheduling on loans taken out in the 1970s meant that the DPRK could not borrow money on commercial or concessional terms from the West. Agricultural production in the DPRK is input intensive, requiring chemicals, fertilizers, electricity for irrigation and other agro-industrial inputs. Lack of necessary imports to fuel the DPRK's agro-industries combined with the consequences of natural disasters in 1994 and 1995 that flooded coal-mines (necessary in the DPRK for electricity

production) and destroyed food stocks (by some accounts most of which were stored underground and consequently destroyed by heavy and intense flooding) and crops, combined with four or five years of secular decline in the economy, including in agricultural production, brought disaster to the DPRK.

- 4.2 Crudely speaking annual cereal requirements to feed the DPRK population at a minimum level of existence (the FAO guideline is at 167kg per person per year), to provide basic levels of animal feed and to provide enough seed for re-planting is around five million tonnes. Table 1 below indicates that cereal production remained substantially below this target during the late 1990s.

Table 1. DPR Korea: Cereal Production, 1995/96-2000/01



Source: FAO/WFP Crop Assessment Mission to the DPRK, Special Report, July 2001

- 4.3 The most tragic result of chronic food deficits in the 1990s was the famine of the 1990s that best estimates argue killed up to a million people over a period of four or five years (Lee, 2003).
- 4.4 The continuing outcome has been the prevalence of chronic and acute malnutrition in the population as a whole, most extensively documented in the case of children under seven years old and women.

Government responses to the economic and food crisis

- 4.5 The DPRK responded to the economic and food security crisis of the 1990s with a mix of policies in the agriculture sector, the wider economy and in its foreign policies.
- 4.6 In the agriculture sector the DPRK government undertook ‘rezoning’ of land, essentially a rationalisation of land use to permit more efficient farming. It

encouraged crop diversification (mainly potato production) and the more intensive use of the limited arable land (through double cropping). The government increased economic incentives for farmers through policy changes that rewarded small sub-work teams and allowed farming households to produce more and sell more surplus on private markets. The government also tolerated the use of marginal land as an emergency solution for food production.

- 4.7 Policy changes in agriculture reflected an intensification of policies already underway in the DPRK rather than major changes in policy direction.
- 4.8 Given the vastly changed macro economic context, sectoral policy change in agriculture alone could not provide the necessary impetus to recovering self-sufficient cereal production.
- 4.9 The DPRK also has undertaken some economic reform, most visibly in the July 2002 measures that increased prices and wages and attempted to bring principles of profitability into operating and accounting mechanisms. The government did not however relinquish controls on price setting and allocation and distribution of economic resources.
- 4.10 As far as can be ascertained banking, credit, accounting, insurance and judicial systems have not evolved in such a way as to provide a legislative framework for regulating legitimate profit-seeking by individuals within the new ‘market socialism’ of the DPRK economy. Given that there are now some aspects of the market at work in the DPRK in the widespread marketisation of the economy and some legal foundations for pursuing ‘profit’ but at the same time the institutional infrastructure is still designed to frame the former closely planned and directed economy, there is a disjuncture between the economic ‘facts on the ground’ and the extant domestic legal framework.
- 4.11 This disjuncture leads to a lack of clarity about what constitutes a legal and what constitutes an illegal economic transaction. It encourages corruption as there is no legislation to define what constitutes corruption in the new market socialist economy. It also provides a powerful disincentive for foreign investment in that uncertainty remains as to the respective rights and responsibilities of government, business and the individual in contract law.
- 4.12 Continuing uncertainty in DPRK economic policy and the lack of institutionalization of economic reforms, is one reason for the continuing reluctance of international private business and foreign governments to invest in the DPRK. (Another reason is of course the uncertainty over political and security outcomes on the Korean peninsula).
- 4.13 The result is that economic activity remains low in the DPRK. By 2003 GDP per head at \$818 per capita had only just climbed back to near the 1997 level of \$811 – from a low of \$573 GDP per capita in 1999 (FAO/WFP, 2004, p. 3)
- 4.14 Given the inability of the government to achieve food security from changes in domestic agricultural and economic policies, it has been forced to rely on humanitarian and economic support from foreign governments, international organisations and non-governmental organisations. At 2005, China and South

Korea are the DPRK's most important trading partners as well as the largest suppliers of humanitarian assistance and concessional economic transfers.

5. Current food availability

- 5.1 The 22 November 2004 report of the FAO/WFP Joint crop assessment and food supply mission indicates a continuing aggregate cereal deficit of just under half a million tonnes for 2004/2005 (FAO/WFP, 2004). This deficit does not include 300,000 tonnes of cereal at concessional rates from South Korea. If the promise of South Korean assistance was not included, the real aggregate cereal deficit would be 800,000 tonnes, not much less than the average cereal deficit of around a million tonnes, that is 20 per cent of national food minimum requirements, that was characteristic of annual cereal deficits through the late 1990s, as illustrated in table 2 below.

Table 2: Cereal deficits from FAO/WFP Crop and Food supply assessments in the DPRK (cereals, '000 MTs)

| Date of Crop Assessment Report | Dec 95 | Dec 96 | Nov 97 | Nov 98 | Nov 99 | Nov 00 |
|---|--------------|--------------|--------------|--------------|------------|--------------|
| Marketing Year | 95/96 | 96/97 | 97/98 | 98/99 | 99/00 | 00/01 |
| Total Availability | 4,077 | 2,995 | 2,663 | 3,481 | 3,472 | 2,920 |
| Production | 4,077 | 2,837 | 2,663 | 3,481 | 3,472 | 2,920 |
| Opening Stocks | - | 158 | - | - | - | - |
| Total Utilisation | 5,988 | 5,359 | 4,614 | 4,835 | 4,765 | 4,785 |
| Food Use | 3,688 | 3,798 | 3,874 | 3,925 | 3,814 | 3,871 |
| Feed Use | 1,400 | 600 | 300 | 300 | 300 | 300 |
| Other Use, seed and post harvest losses | 900 | 645 | 440 | 610 | 651 | 614 |
| Closing Stocks | - | 316 | - | - | - | - |
| Import requirement | 1,911 | 2,364 | 1,951 | 1,354 | 1,293 | 1,865 |
| Commercial import capacity | 700 | 500 | 700 | 300 | 300 | 200 |
| Concessional imports | | | | | | 500 |
| Uncovered Deficit | 1,211 | 1,864 | 1,251 | 1,054 | 993 | 1,165 |

Source: WFP, Emergency Operation DPR Korea No. 5959.02, Emergency assistance for vulnerable groups, Pyongyang, mimeo, 2000

- 5.2 The current food security situation in terms of aggregate national availability is therefore of a continuing substantial food deficit.
- 5.3 The immediate implication is that without continuing short-term humanitarian assistance, sections of the population would again face starvation and severe malnutrition.

The current food availability challenges

- 5.4 In 2002 the numbers of the non-farming population stood at 15.6 million, some 70 per cent of a total estimated population of 23.5 million (UN CCA, 2003). The remaining 30 per cent of the population was composed of

- cooperative farming families. The medium and long-term challenge is therefore to move towards sufficient food availability to cover the basic needs of the non-farming and farming population on a regular and sustainable basis.
- 5.5 The difficult farming environment (short growing seasons, mountainous topography, relatively scarce decent arable land) combined with a continuing necessity for high-energy agro-industrial inputs and the dilapidated farming infrastructure (including low levels of mechanization, obsolescent and inefficient irrigation networks) mean that the marginal increases in harvests over recent years have only come about because of the annual substantial fertiliser assistance from South Korea.
 - 5.6 Increases in agricultural production can contribute to easing the cereal deficit. Achieving aggregate food availability on a sustainable basis such as to feed the population even to a minimal survival level cannot, however, realistically come solely from increasing agricultural production. This is because the scale of increase in agricultural productivity and production in order to meet aggregate food needs from self-sufficient agricultural production is such that it is not feasible given current, medium and probably long-term terms economic constraints.
 - 5.7 Sustainable aggregate food security will only come from a mix of improving agricultural productivity and increasing export earnings so as to be able to buy food on commercial terms.
 - 5.8 This is recognized by the DPRK government and the UN agencies who argued for a multi-sectoral food security strategy in 2003 (UN, 2003). The Common Country Assessment states that *'Food security can be achieved only through concerted action across sectors, and through economic development and growth... DPR Korea, would have to maintain a level of food imports even with a dynamic agricultural sector. The capacity to import food depends on trade and economic growth. To ensure food security therefore demands a multifaceted, parallel and simultaneous approach to a wide spectrum of economic and social issues.'*

6. Food accessibility

- 6.1 Prior to the economic and food crisis of the 1990s, food and income allocation and distribution took place centrally with rations allocated according to a transparent points scheme based on occupational status and age. Basic rations were guaranteed to the population. Health, education and social facilities were free and provided nationwide.
- 6.2 The Public Distribution System (PDS) managed and distributed food to non-cooperative farming families. Cooperative farming families were expected to provide food, personal income and financing for village health, education and social facilities through own farming production and sales from farming products.
- 6.3 In times of food shortages prior to the 1990s, the evidence suggests that food at reduced rations remained accessible to the population. The PDS mechanisms continued to operate and farming families managed to continue to feed themselves (Lee, 2003).

- 6.4 After the mid-1990s the government did not have access to sufficient food stocks to supply the PDS. In some months, in some counties from the mid-1990s onwards, the PDS had no food supply at all. From the late 1990s the PDS evolved as a supplier of last resort of rations to key workers and vulnerable groups. The system changed from allocating a differential ration based on work points for every member of the population to a system based on a notional common flat-rate minimal ration of around 300gm per day, depending on food availability, to those sectors of the population who were deemed most in need at any particular time.
- 6.5 Farming families also suffered from lack of access to food during the mid and late 1990s. Those with better farmland and access to inputs recovered their capacity to feed themselves and their families by the early 2000s. Poor farmers on the other hand did not recover such as to guarantee secure access to year round food supplies. They had previously relied on government supplied inputs such as fertiliser, chemicals, and oil, and, in the new economic climate of the 2000s, were no longer able to receive such support.

Current Food Accessibility challenges

- 6.6 The economy stabilised at a low level of activity in the 2000s and has also been reconstituted around broad market principles of profitability and incentive structures. As in all market systems some benefit and many do not. Social market systems tend to protect those who are most vulnerable in market societies through provision of a social safety net. In the DPRK, the social security net that broke down with the economic devastation of the 1990s has not been restored. Those unable to earn income or without assets to swap for food are therefore disadvantaged and some are vulnerable to the most severe repercussions, that is starvation and death, should food assistance be unavailable.
- 6.7 The July 2002 economic reform measures have legitimated market mechanisms. Food security in terms of having regular access to food and other goods such as medicines and health care is within the reach of those who can benefit from the new market mechanisms and from the relatively small hard currency sector of the economy.
- 6.8 Soaring inflation, high unemployment and underemployment, and continuing food and goods shortages have meant that those social groups and individuals without access to the benefits of the market, the majority of the population, have remained food insecure. Given continuing chronic food deficits and in the absence of substantial foreign investment, those currently vulnerable to recurring food are likely to stay vulnerable. Without substantial economic growth it is likely that these sectors of the population will become more not less vulnerable.
- 6.9 One indicator of food insecurity is the prevalence of malnutrition in the population. In the DPRK, rates of malnutrition have diminished since the post 1998 highs but have stabilised at levels that are similar to those of chronically poor countries of south-east Asia.

- 6.10 Those with inadequate regular access to food, can be understood through non-mutually exclusive categories based on geographical location; occupation; gender and age.

Geographical variations

- 6.10.1 The most food insecure locations are situated in the North-East of the country in the provinces of North Hamgyong and South Hamgyong, particularly in the cities of Chongjin, Hamhung, and Kimchaek and in mining counties like Musan. These are areas without reasonable quality arable land, and with short growing seasons, and extreme winter temperatures. They are home to high numbers of unemployed industrial workers who lack access to benefits brought about by the limited foreign investment that has taken place in the DPRK in the 2000s in the South and West of the country.

Occupational disparities

- 6.10.2 Those most likely to be suffering from food insecurity as a function of their occupational status are those without access to hard currency, opportunities for food production or without the capacity to engage in the flourishing petty trade sector that is a core feature of the new DPRK economy. These include the unemployed and underemployed industrial workers; public and social sector employees; poor farmers (on non-productive or marginal land); and those unable to work due to age (pensioners and children), sickness or for other reasons (prisoners for instance). The adult unemployed are additionally vulnerable as, unless they are pregnant or nursing, they are normally ineligible for international humanitarian assistance.

Gender variations

- 6.10.3 Women and men are both vulnerable to food insecurity in the DPRK, but in different ways. Because of cultural norms, it is generally the woman's responsibility to provide food for the household. The woman often eats last and in a situation of absence of food in the household, may not eat at all, prioritising the males for food allocation within the household.
- 6.10.4 In addition, women in the DPRK, as in many other countries are to be found working predominately in low paid and low status jobs – such as in the care professions. These jobs are not seen by the government as key sectors for regeneration of the economy and are therefore not given priority for food allocation when only a limited amount of food was/is available for local distribution. When PDS rations are scarce therefore, it is likely that males in industrial and energy sectors will be given priority for food distribution.

6.10.5 In addition, the 1998 nutrition survey found that male toddlers (12 months to 24 months) were much more at risk of suffering from severe malnutrition (wasting) than females of the same age. The working hypothesis was that in times of extreme food stress, i.e. famine conditions when girls and boys are allocated the same amount of survival rations, little boys may be treated as if they were less vulnerable (to cold for instance) and these marginal differences in treatment may have a cumulative affect on differential rates of severe malnutrition. No conclusive explanation was found and by the time of the 2004 nutrition survey the rates of wasting were found to be similar in girls and boys. The prevalence of stunting (low height for age) was however found to be statistically significantly higher for boys than girls in the 2004 nutrition survey.

Age variations

- 6.10.6 Those of pension age without assets, with a virtually worthless pension because of high inflation, with an inability to engage in market activities due to infirmity or lack of contacts, and without family wherewithal to offer material support are also vulnerable to food insecurity.
- 6.10.7 At the other end of the age spectrum, the prevalence of stunting (low height for age) remained high in 2004 at 36 per cent – a slight fall from the 2002 figure of 39 per cent (Central Bureau of Statistics, 2005). Disaggregated figures show that twenty per cent of babies (0-11 months) were stunted in 2004. Those aged 12-23 months remain acutely vulnerable to malnutrition with 8.7 per cent classed as ‘wasted’ (low weight for height) in 2004 (Central Bureau of Statistics, 2005)..
- 6.10.8 Young babies are vulnerable to malnutrition if mothers are malnourished. Babies aged 12-23 months can literally starve if, as in the DPRK, there months suffer when there is insufficient and inadequate weaning food available.
- 6.11 With the consolidation of market principles and mechanisms of operating, it is likely that sectoral vulnerabilities will become only one part of the analytical matrix for understanding vulnerability to food insecurity. This is because the coping mechanisms open to individuals and household differ across the country, based on their differentiated access to market opportunities.

Government and international community response to food accessibility challenges

- 6.12 The government has attempted to maintain a ration of last resort for all the population but has not always been able to maintain basic rations for all including the most vulnerable.
- 6.13 The multilateral international humanitarian organisations and NGOs have prioritized the most vulnerable, including children under seven years of age and pregnant and nursing women for food aid.
- 6.14 Major donors continue to be South Korea and China. The former offers assistance through multilateral and bilateral channels. The latter donates assistance through bilateral channels. Japan has also been a major donor of humanitarian assistance. If a political solution is found to ongoing security conflicts in the Korean peninsula, Japan will also be a major provider of development assistance. This is because it is publicly committed to transferring substantial amounts of funding in recompense for its colonial occupation of Korea, as it has already done with respect to South Korea in 1965. Russia also donated food to the DPRK through the UN WFP.
- 6.15 Outside North-east Asia a large number of countries have provided humanitarian assistances including the United States; and the EU and its member States.

7. Addressing the challenges: New approaches

- 7.1 The DPRK government decided in 2004 to move away from a humanitarian assistance strategy in the direction of a long term re-development approach.
- 7.2 A focus on development will require investment from external sources and will also require recognition from all parties that there continues to be cause for humanitarian concern in the DPRK in terms of food insecurity. External investment, therefore, should be tailored to providing assistance to those who need it most, at the same time as providing development support.
- 7.3 Investment in the North-east, for instance, would not only provide employment and hence income opportunities for populations that are food insecure. It would also provide support for the energy requirements of energy required for agriculture for instance electricity for irrigation and contribute towards support to re-building industrial production and therefore export opportunities. This in turn would help provide hard currency such that the DPRK can buy food on commercial markets.
- 7.4 Foreign investment of the volume needed to generate economic regeneration and therefore sustainable food security is not likely to come from private investors in the short or medium term. Such investment is only likely to be available from governments or international financial institutions.
- 7.5 A focus on development will require new modes of government-international collaboration. These should be respectful of the sovereignty of the DPRK government as well as providing accountability to the tax payers of investor states if investment comes from public bilateral or multilateral funds.

- 7.6 Development assistance on its own, however, will not bring economic transformation, development and sustainable food security to the DPRK. Without support in building the institutions of a modern economy that will help the DPRK compete in a globalised market, financial and capital transfers are likely to be non-productive.
- 7.7 The 2004 FAO/WFP recommends that in addition to food aid that the ‘international community enter with the Government into a policy dialogue to set an enabling framework to mobilize the economic, financial and other assistance needed to promote sustainable food production and overall food security’. (FAO/WFP, 2004, p.1). FAO ideas of encouraging policy dialogue should be incorporated into these new forms of collaboration.
- 7.8 There is an increasing recognition by the international organisations that market opportunities are now disaggregated such that it makes more sense to analyse vulnerability to food insecurity, and hence target assistance, based on household, as opposed to sectoral vulnerability.
- 7.9 Successful targeting of household-based assistance will also involve closer cooperation between the international organisations and the DPRK government, and better data availability and data sharing on household food supply and demand.

8. Challenges – and how to overcome them

- 8.1 According to the joint analysis of the DPRK government and UN agencies in the CCA, achieving food security in the DPRK, depends not just on restoring agricultural production (UN, 2003). It is a multi-sectoral issue. Achieving food security is not confined to any one defined sector such as agriculture and food production. As the CCA argues, ‘To ensure food security therefore demands a multifaceted, parallel and simultaneous approach to a wide spectrum of economic and social issues.’
- 8.2 The devil, however, is in the detail. How that multifaceted strategy is developed, implemented and hopefully achieved, is the issue in contention.

9. Recommendations

- (i) Potential bilateral and multilateral investors and the DPRK government should refocus collaboration on integrated development, sustainable food and energy security and anti-poverty strategy.
- (ii) This integrated strategy should be developed and implemented through a multilateral, intergovernmental, technical agency set up for the time-specific and limited purposes of collaboration to achieve redevelopment for the DPRK.
- (iii) Given that major donors are likely to be South Korea, China and Japan, there is a case to be made for a technical Economic

- Development and Food Security (EDFS) agency to have as its constituent members the countries of North-East Asia.
- (iv) Foreign investment should be channeled through the EDFs such as to encourage mutual responsibilities in developing transparent, accountable and efficient procedures and modes of operation.
 - (v) Assistance should as a matter of principle be always accompanied by technical assistance in relevant and appropriate institution building activities; ranging from the implementation of quality assurance procedures for industrial and energy systems, or in terms of consolidating a modern banking, credit and accounting system.
 - (vi) Policy dialogue on food security should include relevant technical institutions like the UNDP, FAO, IFAD and WFP, with IBRD and ADB as observers.
 - (vii) External providers of assistance should re-orient policies towards employment creation in food vulnerable geographical areas. This should be in the form of socially productive investment, for instance, in the energy sector including the mining sector, in the North-east of the country.
 - (viii) Recognising that new patterns of food vulnerability have now emerged as a consequence of household's lack of access to market opportunities, it is recommended that future assessments of humanitarian need are based on joint government-international organisation assessment at household levels.

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