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Current Economic Conditions in Myanmar and Options for Sustainable Growth

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Abstract

In this paper, an extensive report on the economy of Myanmar prepared in 1998 is supplemented by more recent reports as of fall 2002 (included as appendices).

The economy of Myanmar is one of the poorest in South East Asia. Despite relatively rapidly growth during the 1990's, per capita income by 1998 was little higher than in the middle 1980s. Inflation rates are high, the currency value has fallen sharply, and Myanmar has one of the world's lowest rates relative to income of government revenue and non-military spending.

Agriculture in Myanmar has an unusually high share (59%) of GDP. Despite a high reported growth rate, yields for most food crops have remained stagnant or dropped. Poor price incentives and credit systems constrain agricultural production. As of 1998, farm wages are barely enough to provide food, with nothing left over for clothing, school fees, supplies, or medicine. Environmental problems including deteriorating water supply and diminishing common property resources further impact the poor.

Industry suffers from limited credit, fluctuating power supplies, inflation and exchange rate instability. A possible bright spot is offshore gas potential. However, much of the expected revenue from offshore gas development may already have been pledged as collateral for expenditure prior to 1998, and thus will go primarily to service debt.

Recent evidence summarized in a paper by Debbie Aung Din Taylor (Appendix 3) indicates that most people in rural areas are much worse off today than a decade ago. Decline in agricultural production is aggravated by severe degradation of the natural resource base. River catchment areas are denuded of forest cover, leading to more frequent and severe flooding. Fish stocks and water supplies are diminishing. These trends are pervasive and reaching a critical level. Assistance is urgently needed to provide the rural poor. Sustained international attention is needed to reverse the current rapid decline of economy and environment.

Current Economic Conditions in Myanmar and Options for Sustainable Growth[1]

I. Introduction and Background

The economy of Myanmar is one of the poorest in ASEAN, but has seen fairly rapid growth since 1992. Even so, real per capita income is little higher than in the middle 1980's and official estimates show a decline in real per capita consumption, though growing investment, over the last decade. Positive factors include a generally good reported performance in agriculture, the largest sector of the economy; strong prospects for growing gas exports and revenues; and a multi-billion dollar backlog in approved but as yet unrealized foreign investment. Negative factors include a continued high and even rising rate of inflation, a sharp fall in the value of the Kyat, and one of the world's lowest ratios relative to income of both government revenue and non-military spending. There does not appear to be a near-term prospect of a major renewal in aid, and arrears continue to mount on some official and even private borrowings. The problems of overbuilt real estate are likely to accelerate a decline in realized inflows of non-oil direct foreign investment caused by the economic troubles in Asian economies, which are the major non-oil investors in Myanmar.

The basic economic problems in Myanmar lie in the long period, starting in 1962, in which the policy aimed at isolation of Burma from the rest of the world while a type of central planning was used crudely and inefficiently on an agrarian society. These policies were officially ended a decade or so ago, but there are still many vestiges of the old system in place. In addition, the SLORC military government (since renamed the Peace and Development Council) has habitually run large budget deficits and financed them largely by printing money. The low and declining share of revenues to GDP (7% in 1996/97), coupled with heavy military spending and state enterprise deficits, mean that recurrent civilian spending is extremely low, only 4% of GDP. This means that civil servants' salaries are far too low to live on without some sort of supplementation. Even with the low civilian spending, government deficits have fed an inflation which is measured at 2-3% a month, and believed by many to be higher. The damage done by this inflation is worsened by the fixed interest rates of around 1.3% a month for deposits and 1.7%% for loans, which ensures a low supply of savings relative to GDP and an

[1] This paper, a combination of a trip report and brief analysis, was prepared in 1998 for the UNDP, which arranged for meetings and field trips in Yangon, the Chaung U-Mandalay area, and parts of the Ayeyarwady Delta. It should be read with a more recent paper (Appendix 2) and a separate but related paper by Ms. Debbie Aung-Din Taylor who accompanied the author and UNDP personnel to the places and institutions visited (Appendix 3). Mr. Thomas Vallely also assisted in the interviews and discussions leading to the 1998 paper. A special notice of thanks should be given to ex-Rector U Myat Thein who met with us and accompanied us on the Delta portion of the visits.

excess demand for loans. (In 1995/96, bank deposits were only 11% of GDP and loans only 7%, while levels in ASEAN are five to ten times higher.) Informal sector loan rates are 5% with collateral up to 20% a month, and preclude many from all but the smallest and fastest return investments.

Many in the government point to the 7% annual growth in GDP measured from 1991/92 to 1996/97 as an indication that the economic situation has been decisively changed. The actual GDP growth rate may or may not be higher: private activity is not well measured, and has been growing rapidly, but some of the measured growth may include previously existing but uncounted activity which is now included officially. However, this growth was realized after sharp declines in the late 1980's and as of 1998 had only brought real per capita income slightly beyond where it was in 1985. Moreover, the gains from the liberalization have been largely spent, and may not support further rapid growth without more reform. The growth also took place during a period of capital plenty in much of Asia, and some of the capital flows in the entire region showed more enthusiasm than discernment. The situation is now reversed, and this will tend to slow further realizations of new or already approved projects. Furthermore, the general slowdown in Asia will depress many raw material prices, make it harder for Myanmar's citizens to find work abroad, and make the exports of ASEAN tough competition in both export and domestic markets. Overall, the external environment has changed from supportive to unfavorable, especially given the continuing support in Europe and North America for policies restricting trade and investment flows to Myanmar.

A worrying additional element is that foreign exchange reserves have become extremely limited at a time when capital flows are slowing. Unpaid letters of credit were cited as a problem by businesses, as were difficulties withdrawing foreign currency from banks even when it was from the depositor's own foreign currency account! It is possible that foreign exchange reserves are down to a few weeks of imports, and some concerns were raised about the supply of fertilizer for the next planting season. Thus, both the short term and long term future of the economy were in doubt as of early 1998.

II. Agriculture

Most countries with rapid growth register industrial growth rates two to three times those of agriculture. In Myanmar, real agricultural growth has been almost as fast as the other sectors. Agriculture in 1995/96 had an unusually high share (counting livestock, fishery, and forestry) of 59% of total measured GDP in current prices. Even in 1971, Indonesia had a similar ratio of only 45%. Given this strong performance and large

relative size, it is worrying that yields of many crops have remained level or even fallen since 1985.

Table 1 shows that of the 26 million acres planted to food crops in 1995-96, nearly 20 million or *over three out of every four acres had food crops whose yields were stagnant or dropping over the last decade.* Only one acre out of six had crops whose yields outpaced the growth of population. On balance, this means that Myanmar food sector usually required area gains to account for growth during a period when its markets were being liberalized and more connected to world markets. The area expansion came partly from multiple cropping and expanded irrigation, but also partly from increased deforestation. Normally, if irrigated area increases, so does yields – yet this was not generally the case. It appears that the gains that should have been realized from increased irrigation, fertilizer use, and better connection to markets and higher prices were offset by other factors. It is likely that these factors included forced growing of paddy in unsuitable areas, unfavorable weather, and systemic environmental problems that contribute to declining soil fertility and flood-drought problems.

Table 1

Changes in Yields of Foods from 1985 to 1995 in Myanmar

(Acres are in millions)

		Change in Crop Yields:			
Crops	# Acres	Down	Level	Weakly Up*	Strongly Up
Rice paddy	15.2		X		
Wheat, corn, sorghum, Sunflower, black gram, peas, onions, garlic, potatoes, coffee, sugar cane, coconut	4.6	X			
Groundnuts, oil palm, soybeans, chilies, tea	1.8			X	
Sesame, green gram, cow pea	4.5				X

*Weakly up means that yields rose less than 20%, the rise in population during the decade. Strongly up means yields rose more than 20%, and so production per capita can rise on unchanged area.

Source: Agricultural Statistics [of Myanmar], 1985-86 To 1995-96, CSO and Department of Agricultural Planning, Yangon, 1997. Table 80, pp. 160-161 and Table 35 are used.

The long-term outlook for further growth in food output is not bright under the current set of policies, for the gains from better resource allocation and incentives to producers have probably been largely felt. (This was the case in China, for example.) *The lack of*

adequate price incentives and credit are the largest constraints and the most urgent to address, but the allocation of transferable land use rights (as in Vietnam) is also important as it allows the use of land for collateral. One other urgent and related issue is the freeing up of farm exports from state monopolies and other, sometimes local, restrictions. Other issues are the provision of better rural infrastructure, seeds, extension, and related services. However, these require money while the first group "only" needs a change in policies. A deeper examination of the crucial credit issue is provided in another paper.

This pessimistic view of future growth prospects for agriculture is different from the view expressed by some well-informed observers of the farm sector in Myanmar. (See *Sustainable Agricultural Development Strategies: Experiences of Myanmar Economy in Transition*, by Tin Soe and Tin Htut Oo, January 1997, ESCAP Agenda Paper) The recent rebound in agricultural production from its depressed levels in the late 1980's is cited as an example of what can be achieved by better policies. Indeed, reported rice production in 1995/96 was 37% above that of a decade earlier, and represented a growth of just over 3% a year from that previous peak production level. The authors are correct that the direction of policies since 1988 is better in many ways than those previously employed. One difficulty is that the general direction of policy announced by the center does not necessarily get enforced by local authorities. Forced quota sales of paddy rice at low prices, for example, were officially ended in 1997, but seem to reappear when purchasing by tender fails. Another problem is the general fiscal and financial situation that undercuts the ability of farmers to improve: credit is very limited, roads in poor condition (meaning high marketing costs), and irrigation facilities are too often poorly managed and maintained. Forced growing of paddy rice is still practiced in some areas, and this often results in poor yields. The very low price of paddy relative to world prices also hampers the efforts of farmers to improve yields. Thus, while there have been real gains and further progress is possible, the current constraints appear more important than the potential from marginal policy adjustments in the generally poor overall environment.

One way of illustrating this point is to compare the current price policy for paddy and fertilizer in Myanmar with that of Indonesia when it was supporting the cultivation of rice during a period of rapidly rising fertilizer use in the early 1980's. The price of paddy in Myanmar in early 1998 was 400 kyats per basket or, at an exchange rate of K400 = $1, $48 per ton. This implies a retail rice price of $100 a ton, since the urban retail or f.o.b. export price is normally twice the farm-gate price. (Prices were changing rapidly as we left, perhaps reflecting some panic buying. However, urban rice prices were K80 per pyi, or about $95 per ton during the field trips.) The urea fertilizer price had been K2500 for a sack of 50 kg., but that price reflected end-1997 exchange rates and seemed destined to rise in kyats, even if it remained at $10 per sack or $200 per ton.

(Little fertilizer was being used or bought in January.) Unless the paddy price rises, it will soon take five tons of paddy to buy one ton of urea, though the current ratio was 2.5 tons of paddy for one ton of urea at late December- early January prices. In Indonesia, because of subsidies to urea, it was not unusual to have paddy prices a quarter *higher* than urea prices. If rice export prices could reach the $250 per ton level of Vietnam (Thailand's rice sells for about $300/ton), then paddy would sell for $125 per ton and urea for $200, a urea/paddy ratio of 1.6 to 1. If rice prices could be brought up to world levels, a much higher level of fertilizer application would be profitable and likely. Illustrative calculations are made below.

Since 75% of the population lives in rural areas, and only one-third of that population works on farms of 3 acres or more, the future of poverty alleviation or avoidance clearly depends on sustaining progress in rural areas. If the hard-pressed farm laborers (see next paragraph) crowd into cities with few jobs, the results will be more crime, crowding, and unemployment. This can and should be avoided, for the sake of the people themselves and also for social stability and future economic growth. Only two out of every ten 11-13 year olds in rural areas are enrolled in the sixth to eighth grades, and a future based on higher levels of skill and technology cannot be realized when so many potential students need to stop education due to poverty and poor availability of schools in the rural areas. A student just completing the fourth or fifth grade may be barely literate and harder to train than one with more and better schooling. Progress in agriculture will allow more families to send their children to school for longer periods, and they will utilize better technology on and off the farm.

The typical farm wage in the Dry Zone and Delta areas in January 1998 was100 to 150 kyats per day, or about 1.4 to 2.0 kg. (5.2 to 7.5 tins of 9.5 oz. each) of cheap rice. [The price of rice is likely to increase, perhaps sharply, in the near future.] A typical family of five or six people needs 10-15 tins of rice. A family with two healthy workers together earning K250 a day *with work every day* can just buy rice and a very little extra food but no clothing, school fees and supplies or medicines. Frequently, there is no wage work during many parts of the year, and other income earning opportunities, such as weaving straw or roofing, pay even less. If farm yields were to stagnate or fall further while population grew, it is clear that these families would become even worse off, even as they cleared the limited amount of arable forest land. While charity and gifts can offset some suffering, the long-term imperative is clear: progress increasing yields and employment opportunities need to be maintained and accelerated if the growing population is to be accommodated at current income levels, much less to improve their position.

The difficult condition of the poor, especially in urban areas, has been used as an argument to reduce or eliminate licenses to export rice. These exports fetched $230 per

ton last August, yet the price of similar quality rice in Myanmar in early 1998 was less than one-half of that, due to the restrictions on rice exports. This very low price also meant the price of paddy was low, about 400 kyats per 46 lb. basket or about $1 per basket or $48 per ton at mid-late January exchange rates. (The unstable exchange rate makes precise calculations difficult, and there are indications that even the parallel rate is subject to administrative measures. However, attempts to manage the "free" rate can only be short term. My working assumption is that the truly free parallel rate is 400 kyats = $1 in January 1998. The reported parallel rate to the dollar fluctuated above 300 in Yangon, but was higher at the Thai border.)

If paddy prices stay low, short-term problems among the rural poor and urban groups are avoided, but medium and long-term growth in agriculture is sacrificed. If rice prices rise too quickly, there will be severe hardship and perhaps unrest. A gradual decontrol mixed with better provision of credit might allow this dilemma to be resolved. A 110 lb. bag of fertilizer costing $10 will produce 500 to 700 lb. of paddy worth only $12 to $15 at current prices. If the risks of cultivation and the costs of informal credit (10% to 20% per month) are factored in, the current price ratios virtually rule out fertilizer use. There have been about 200,000 metric tons of urea used on paddy crops, so just over one million tons out of seventeen million tons of paddy can be attributed to urea fertilizer use. However, recent urea use of only 13 kg. per acre or 30 kg. per hectare are extremely low for application rates, and if rice and paddy prices more nearly reflected world levels, it is likely that much heavier application rates and output would be observed. Rates of application in Thailand and Vietnam were five to ten times higher per acre. Thus, the benefit of moving towards world prices is likely to be five to ten million more tons of paddy production if marginal response ratios of paddy to urea stay in the current range.

The low paddy prices are a problem in spite of low farm taxes. Forced quota deliveries at low prices are no longer officially required, though local reports of "voluntary" sales at below market prices make the local reality of this changed central policy directive uncertain. This is of special concern because the income situation of many farmers may be near crisis. The combination of three poor crop years, floods, rising fertilizer prices, expensive credit, and low paddy prices may deter farmers from applying as much fertilizer as in the past. This will depress outputs and incomes further – severely so if a fixed amount of paddy at low prices is still required to be delivered. A companion paper by Debbie Aung Din Taylor provides a deeper analysis of this issue. *However, with urea prices around $200 a ton providing 4 tons of rice worth over $800 at world prices, it is clear that any policies that depress fertilizer use by farmers destroy wealth.* They also aggravate even the short-term (less than one year) food production and foreign exchange pressures the nation is facing. Thus both the supply (of urea)

problems due to foreign exchange and the demand for urea problems due to expensive credit and low paddy prices may damage farmers' incomes.

III. Environmental Factors

A frequent and recurring part of increasing rural hardship was the impact of a deteriorating environment in both the Dry Zone and the Delta. Landless and land-poor households in the Delta commented on the increasing scarcity of fish, crabs, firewood, and even vegetables. Goods that had been collected for "free", or for only an investment of time, were progressively less available. Water supply was also deteriorating, as increasing amounts of fresh water was drawn out of wells, and increasingly rain was running off land that had been cleared of mangrove and other trees. Salty water intrusion was seen as an issue both for crops and drinking water. In the Dry Zone, the prolonged period of untimely and limited rainfall had created hardship, most obviously due to failed crops or expensive replanting. Water was also a problem, as even deep wells had become "sour" – a common problem but one that seemed to be worsening. (Sour water has chemicals that make it unhealthy to drink.) Prolonged drought had created cracks in river dikes, so when even a normal flood did arrive, it did more damage and broke through. There was evidence of large scale dredging in parts of the Ayeyarwady River, something not observed five to ten years ago. It is unclear if several years of limited rainfall in normal periods is part of a new climactic pattern or simply random variation. However, progressive removal of forests and even of forage on pasture may be related to these developments. Pending further research, it is difficult to do more than suggest a possible link between the deteriorating environment and the increasing problems of many small farmers and landless households.

IV. Oil and Gas

One bright spot for Myanmar is its significant gas deposits. The offshore Yadana field will begin sales to Thailand in mid-1998 and produce net revenue of about a half-million dollars a day. The Yetagun field with about half of the annual production of Yadana, will commence production in 1999. Sales from Yetagun will also be to Thailand, with prices around $3 per million BTU, and indexed to rise with inflation. Together these could produce net revenues of nearly $300 million a year in the year 2000. Even larger exports to either Thailand or India are possible as the considerable offshore gas potential is defined and developed. Estimates of annual net revenues in a five to ten year time frame will definitely be much higher than $300 million, but the rate of growth will depend on the size, cost, and location of the fields. Some time and work is needed to

create a secure set of longer-term estimates. However, over the next three years the net revenues to Myanmar should grow to $5 to $6 per capita per year, or 2% of GDP. If, as some suggest, most of these revenues have been pledged as collateral by the government for spending prior to 1998, they would effectively service existing debt rather than add to recurrent or capital spending. In that case, there would be virtually no short-term gain from the increased gas revenues in the next few years. Even if all the projected gas revenues are added to existing taxes, the ratio of revenues to GDP would still be only about half that in most ASEAN countries. Gas will help in the long term, but offers only limited help in resolving the immediate or even medium term problems in the economy.

V. Financial System and Exchange Rates

The banking system of Myanmar retains many vestiges of the old socialist system, even though private banks are now operating and representative offices of many foreign banks have also set up. Reports of unpaid letters of credit, difficulties in withdrawals of foreign currency deposits, and administrative attempts to influence the parallel market exchange rate have created a poor atmosphere for deposit growth or even use of the banks. Deposit and interest rates are only half or less of the 40% or higher actual rate of inflation estimated by many observers in 1997, and the parallel exchange rate was over 300 kyats to the dollar in 1998 (from 165 in 1997), in spite of attempts to keep it from rising.[2]

One impact of inflation is that it makes it difficult for many farmers and businesses to replace their inventories or use their cash earnings to purchase the same inputs they previously used. Farmers in the Dry Zone, for example, complained that unsubsidized fertilizer had risen from 1600 to 2700 kyats per sack, and their previous profit would not allow them to buy the needed urea fertilizer with their own money. They could borrow from a trader, but he would require the farmer to sell sufficient paddy to the trader at 250 kyats per basket rather than at the prevailing price of 450 kyats per basket in order to repay. (Similar rates applied in the Ayeyarwady Delta.) Thus they would need to sell eleven baskets of paddy per sack of urea bought, in effect paying 2200 kyats in interest on a four-month loan of 2700 kyats, an interest rate of 20% per month. A sack of urea, they said, produces twenty additional baskets of paddy on well-irrigated high-yield rice, though other farmers reported ten to fifteen baskets as a more typical yield response to one sack per acre. There were few other credit sources and the Agricultural Bank lent 700 to 1000 kyats per acre, while the two sacks of fertilizer used cost 4800 to 5400 kyats.

[2] By 2001, the rate was 700 kyats per $, and in fall 2002 it varied from 1000-1200 kyats per $. This represents an annual compound rate of increase of 35% since 1994/95.

It has been reported in discussions that there is actually a surplus of liquidity in the government banks that is not being lent out. If this is true, it is hard to understand the risks of lending to farmers at 5% or 6% a month for fertilizer. They would use more fertilizer and produce more rice than if they borrowed at 15% or 20% a month. The banks would make more money than lending at 1.7% a month or not lending. Foreign exchange earnings from rice exports would increase, and any risk of lending would easily be covered by the higher interest rates. Collateral of land use rights should be able to be assumed by a government bank if nonpayment is willful rather than due to a poor harvest.

The perverse impact of inflation can be seen in its undermining of price liberalization. Even with fairly strong increases in official prices, electricity is now only about one cent per kilowatt-hour, far from its replacement cost. The widespread electrical shortages make it very difficult for any Myanmar firm to compete with others in better-supplied nations, and limit the attractiveness of Myanmar for investment. Similarly, fuel prices – only recently increased – are now "too low" since the kyat depreciation. The old combination of shortages at official prices and a much higher parallel market price is reappearing. It had been hoped to end that. Given the tentativeness of the government in this process, progress will only be more difficult, even if the quality of management in the ministries is better.

VI. Industry

There was not adequate time to review comprehensively the industrial structure and situation, but a few field visits did shed some light on the problems and potential of local industry. The complaints of local manufacturers were familiar. There was little credit of any kind, but almost none of the medium-term variety. Supplies of electricity were irregular and almost nonexistent for much of the dry season, when hydroelectricity was especially curtailed. Some firms managed to buy generators, but those that could often had access to capital from outside the banking system, and even outside the country. This made it difficult for firms without such access to compete with them. Fluctuating exchange rates made it difficult to calculate actual profits, since replacement of imported inventory might eat up all "profit" and still leave a deficit to be financed, even to continue operations at the same level of activity. (Increasingly, sheer availability of imported inputs was seen as an issue.) Taxes were officially low, but extra payments were sometimes necessary and added to the uncertainty of business. The short-term demand situation was also a concern, since some investments had anticipated more tourism and continuing construction than appeared to be developing. Taken together, the combination of limited credit, fluctuating power supplies, inflation and exchange

instability, and increasingly uncertain business conditions made growth unlikely and even survival of some firms less than certain.

VII. Concluding Remarks

So long as low tax collections, high military spending and budget deficits, and rapid monetary growth persist, it is hard to see how the difficult long-term economic situation can be reversed. Certainly private capital flows are likely to slow, excepting only oil and gas. That sector alone will not be enough to reverse the current tendencies, at least for several more years. A change in conditions that would loosen the purse strings of the donors does not seem likely, though such a change would present a golden opportunity to reverse the difficulties that could get even worse.

The United Nations will continue its modest efforts at humanitarian aid and stands ready to support the international community if it finds internal conditions have changed enough to merit additional assistance. Certainly the economic events within Myanmar and in Asia generally have created a more difficult situation that is likely to have implications for poverty and also for wider economic and political issues.

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Appendix 1: The Impact of Stopping Forced Quota Sales

It was previously true (1996/97 and earlier) that rice farmers were obliged to sell 12 baskets of paddy per acre to the government at a low official price. This practice has been officially terminated, though local practices seem to indicate a continuation of pressure for sales at below-market prices when procurement by tender fails to produce supplies. This section examines the impact of recent changes reducing or eliminating the quota, along with other price changes, on the real income of rice farmers. Calculations are shown per metric ton. It is assumed that a typical farmer had to sell 12 out of 60 baskets of his rice to the government previously, and may have to sell 16 baskets now, but at a far higher price than the old controlled price.

Old System: (1995/96) 1.0 tons @ K 10,304 per ton
+ .25 tons @ K 3,834 per ton
= K 11,263 per acre, gross revenues
- K 1,500 per sack of urea
= K 9,763 net income (other costs ignored)

It is assumed that one sack of urea fertilizer was the amount used per acre on some improved rice varieties. Yields of about 1.25 tons per acre are assumed, as 48 baskets of paddy equal one metric ton and yields are roughly 60 baskets per acre.

New System: (1997/98): .92 tons @ K 19,684 per ton (410 per basket)
+ .33 tons @ K 14,400 per ton (300 per basket)
= K 22,900 per acre gross revenues
- K 2,500 per sack of urea
= K 20,400 per acre net income.

Nominal net income has risen by 109% in this calculation. How much has real income changed? The CPI available is based on Yangon prices, which has to serve as an inflation indicator for 1996. The Yangon CPI rose 32% from 12/95 to 12/96. Our own inquiries into rural inflation during 1997 resulted in estimates of inflation excluding rice of 50% up to 100%. If we take 70% as rural inflation in 1997, the two-year inflation increase was 124%. *Thus, even with the reduction of forced quota sales, the real income of the farmer has fallen by 7%.* If there is an adjustment for more borrowing at high interest rates, this conclusion is stronger. A somewhat higher price of paddy is needed to allow the farmer to be no worse off than previously, assuming the inflation and cost figures used here are broadly indicative of average rural conditions.

If the higher cost of fertilizer and the increasing inadequacy of official credit is factored in, it becomes clear that fertilizer use is likely to decline. (The fertilizer prices are those

actually observed in the north central part of the nation near Mandalay.) This is consistent with actual observations of farmer behavior and theory: as the relative cost of any input goes up compared to the output price, the use of the input drops. It is hard to know without further research how sensitive the use of fertilizer by Myanmar farmers will be.

Appendix 2: Navigating in the Fog: Comments on the Economy in Myanmar
(*Prepared for a Conference at the Paul Nitze School for Advanced International Studies, Washington, D.C., November 22-23, 2002)*

by David Dapice, Associate Professor of Economics, Tufts University[3]

It is extremely difficult to know what is actually happening in the economy of Myanmar. There are several reasons for this. Starting at the bottom, civil servants are very poorly paid and much trade and production simply go unrecorded. Given extra-legal extraction and corruption, many economic actors actively try to hide their activity. These factors tend to create an understatement, making official data less than the unobserved real numbers. They may also distort growth rates if the coverage fluctuates. In addition, many prices are badly distorted or vary markedly across space and time, starting with the exchange rate.[4] It is not clear that one can speak of a national market or a market price for many goods. Finally there are reportedly, for reasons of prestige, pressures to record higher numbers than those observed. This bias would tend to overstate growth. The practical implication of all this is that the normal trade and national income account data must be viewed as quite unreliable with respect to both levels and trends. This makes any economic analysis a series of more-or-less informed speculations rather than a standard exercise in processing data.

In such difficult circumstances, it is sometimes useful to grasp at the few straws available. What types of data on Myanmar are likely to be relatively reliable? One is the exchange rate. The market rate is widely reported and though it fluctuates markedly, there can be no reasonable doubt that it has trended sharply upwards over the last several years. The parallel market rate was around 100 in 1994/95 (FY to March 31st) to 700 kyat per $ in late 2001. The rate has recently (fall 2002) varied from 1000-1200 to the US$. This is an annual compound rate of increase of over 35% a year. This is in line with reported increases in broad money over the same period. This means that import prices have risen by at least this much, plus any additional amount for world inflation. It also suggests that financial deepening has been limited. If real output and/or money demand had risen very sharply, the exchange rate depreciation would probably not match the money supply growth so nearly.

[3] The author has visited Myanmar a number of times since 1994 as a UNDP consultant and produced a number of reports on various aspects of poverty and economic development. One dated example is his chapter in Burma: Prospects for a Democratic Future, R. Rotberg editor, 1998, Brookings/World Peace Foundation/HIID.

[4] It is reliably reported that sometimes when the exchange rate depreciates too much, foreign exchange dealers are threatened or told to close for a period.

Agriculture is said to employ 60% of the labor force and account for half of GDP. The major crop is rice. Rice paddy production is officially reported to have risen from 14 million tons in 1990 to a provisional 22 million tons in 2001. A 50%+ increase in rice production in a decade or so would be impressive, if it actually happened. The FAO estimates that milled rice supply per capita was essentially constant over the decade (210 kg milled rice per capita in 1990 and 208 kg per capita in 2000), suggesting that output rose less than population growth. (The FAO estimates population grew 20% from 1990 to 2001.) Of course, if rice exports grew markedly, they could square the rapid growth in food supply with constant or falling per capita domestic availability. However, exports fell from 215 thousand tons in 1990 to 143 thousand tons in 2000.[5] Moreover, recent reports, for example in the Financial Times, (October 23, 2002) tell of 200% rises in rice prices in the past year, even faster than overall inflation. The conclusion must be that rice production is lagging behind even the modest population growth rate. It is very unlikely that the official data are even nearly correct. It is more likely that hunger is increasing.

A third relatively reliable indicator is energy consumption. Electricity production rose nearly 7% a year from 1990 to 2000. In nations such as Myanmar, electricity normally grows from 1.5 to three times as fast as overall real GDP.[6] This would imply real GDP growth of 2.3% to 4.6% a year over the decade or from 0.5% to 2.9% per capita. This is quite a large range, but implies growth in real GDP significantly less than the official period growth of 6% or so a year, and the implied per capita growth of over 4% a year.

The first impression then is of a poor economy with slow to moderate growth, high inflation, and a *relatively* faster growing modern sector and in per capita terms a roughly stagnant traditional sector. ("Modern" output includes sugar or fish, if these use capital-intensive methods – and indeed, these products have shown rapid growth in recent years.) This quick diagnostic tells us little about welfare of the broad population or the prospects for future growth. If there have been sharp changes in the relative distribution of income, it is possible that poverty has worsened for some groups, even while others have gained. Rapid inflation often causes changes in income distribution, as those who have more of an ability to set prices do better than those who are price takers. Such changes are aggravated when land is also concentrated, as appears to be the case. Here again, we are left to guess at trends rather than to document and explain them. Some data are available, but they are either dated or unreliable.

[5] Exports of 800 thousand tons in 2002have coincided with a tripling of prices, suggesting a reduction in consumption by those who are price sensitive. This might also reflect the rice taxes that farmers pay.

[6] Only in China, with a legacy of heavy industry declining, has energy growth been disconnected from GDP growth. Comparator nations are Thailand, Indonesia, and Vietnam.

Consider, for example, the data on child malnutrition. Data on weight for age in the middle 1990's is available for all nations in World Development Indicators 2001, put out by the World Bank. Myanmar reports 28% of its children less than five years of age having a low weight for age. This is lower than India (45%), Pakistan (38%), Sri Lanka (33%), Indonesia (34%), the Philippines (30%), and Vietnam (37%).[7] Many of these nations have higher per capita income, a lower proportion of income spent on food, fairly equal income distribution and generally strong health and education indicators. For example, the under-five mortality rate (per 1000) is 120 for Myanmar but about 50 for Indonesia, 40 for the Philippines and Vietnam, and 20 for Sri Lanka. It is very hard to reconcile the malnutrition and the mortality data, though they can diverge in some cases. Added to this are frequent visitor reports, including some by the author, to selected villages and urban settlements where most children are reported to be on one meal a day, subject to emergency feeding programs, or obviously well under normal weight for age. Without a proper sample covering a very recent period, it is not possible to know if these casual observations should be regarded as typical or unfortunate exceptions. One survey in 2000 found 35% of children under five were below two standard deviations – that is badly under-weight relative to their age.[8] This is more plausible, but still could be optimistic. It is unlikely that Vietnam and Sri Lanka are of the same general level as Myanmar in this respect.

It is important to note that in this author's experience the government's position has been that poverty is not a significant problem because Myanmar has historically been a rice exporter and the habits of charity and mutual support do not allow neighbors to suffer extreme deprivation. Indeed, there has been reluctance to acknowledge poverty or food security issues, even in regions where floods or droughts have created very difficult conditions. These arguments are broadly correct historically. What is uncertain is if recent adverse developments and a growing population are of such a magnitude that these normal buffers are no longer as effective as they once may have been. It is probable that the hostile political conditions (both globally and locally) make it more difficult for the authorities to agree to measure and discuss these issues. Of course, if significant ODA were to begin flowing again, it is possible that there would be some change in these attitudes. On the other hand, Aung San Suu Kyi has indicated an opposition to additional ODA, even humanitarian, unless there are significant improvements in governance. Certainly, longer run growth would require such improvements.

Prospects for future growth depend on a variety of uncertainties. One likely possibility is the further development of gas fields and exports. Recent gas exports are bringing in

[7] The 2002 World Development Indicators gives two values for Burma: one is the 28% and another is 42%.

[8] Multiple Indicator Cluster Survey 2000, Table 13, p. 38. The sample is 25,600 households.

about $600 million each year. There is considerably more gas in the offshore continental shelf than has so far been developed. Much of this could be sold to Thailand or even India at prices thermally equivalent to $15-$20 a barrel of oil. This would provide a flow of export earnings that could be used for government spending and investment, and debt repayment. The drilling and pipelines would require foreign investment, which is assumed. Of course, bitter experiences as well as economic regressions have shown that mineral revenues often lead to wasteful spending and slow growth (Nigeria, Mexico and Venezuela are three examples.) If these exports and revenues do develop, the ability of Myanmar to spend wisely is uncertain at best.

A more promising near-term possibility is to improve farming. Sugar and fish production have already been rising, though the sugar production may not be profitable at current prices. Rice and sesame – both major crops - have suffered from a low rate of fertilizer application, forced cropping patterns, and inadequate capital available to farmers. If ODA were to become available, a combination of rural development loans and *paid* public works with voluntary labor could help get production and incomes up to more satisfactory levels. The current practice of demanding a varying portion of a harvest at low "official" prices would also need to be curbed.

A medium term possibility is the development of labor-intensive exports, since raw materials appear to be in long-term decline as a fraction of total trade. Here there may be real barriers without further reforms. Global garment quotas are supposed to be phased out in 2005, thus taking away from the nation the chance to get started with a guaranteed market. Myanmar had exported $700-800 million a year worth of garments, but attempts to extract more foreign exchange from producers caused a sharp contraction in the industry. Competition with China, Vietnam, Bangladesh, and Indonesia will be intense when policies eventually improve, probably just as quotas disappear. Then garment exports will depend on the cost of production. Low prices for labor would be balanced by low productivity, poor infrastructure and a lack of local expertise. The local suppliers, repair facilities, marketing and design skills would have to start being developed nearly from scratch. This is not impossible, but is likely to prove difficult. Growth without quotas might be slow, and would not start in any major way unless there were improvements in governance, telephone charges, electricity supplies, banking, and exchange convertibility. Without greater manufacturing growth, it is hard to see how the economy could perform satisfactorily over any sustained period.

Any changeover to a serious development regime would have to start with improving the educational system. High reported literacy rates (85% for adults) and near 100% enrollment rates hide significant problems with both coverage and quality. These problems are sufficiently severe that in 1997 only 15% of the population had completed

middle school and 6% had completed high school.[9] Many thus lack functional literacy – being able to follow directions on a medicine bottle or pesticide can. (One in-country volunteer worker estimated functional literacy was below 50%, though this is only a guess. A CIA estimate is around 30%.) At higher levels, constant shut downs and political actions have led to major interruptions in learning. Older teachers, many of whom studied abroad, are now retired. Younger teachers have generally had a harder time getting adequate preparation. Perhaps overseas Burmese can help with these issues, though English should probably also be encouraged beyond the current level of effort. If teaching could be bilingual, a much larger number of regional teachers could quickly be recruited. If only in Burmese, it will take longer to retrain teachers.

It is telling that the Transparency International website listing its "Corruption Perceptions Index 2002" has 102 nations including Angola, Moldova, and Georgia. These are small, poor and sometimes violence prone nations with very little foreign investment. Yet Myanmar is not to be found, even in such an inclusive list. This reflects, natural gas aside, a very low level of foreign investment. There has been some hotel and tourist construction, but with the Asian Crisis and the more recent world economic slowdown, it is unlikely that these will lead to much further activity any time soon. There is certainly overcapacity in the tourist sector and arrivals are modest – about 200,000 a year compared to nearly 10 million in Thailand, 5 million in troubled Indonesia and over 2 million in Vietnam. Tourism also shows little growth in recent years. Myanmar is barely on the map, let alone having a poor relative performance.

Another social sector that will need urgent attention is health. The spread of HIV/AIDS is only now beginning to get adequate attention. There are well over one-half million cases of infection and the rate of increase is likely to be high, aggravated by drug use and prostitution.[10] Malaria and TB are severe problems in many areas, and generally poor nutrition makes many ordinary diseases more lethal. Health care outside of military hospitals is poor, hampered by very low levels of public or private spending. Vaccination rates for DPT, for example, are 20% below that of Vietnam. Unless there is a sustained effort to improve these services, the health and productivity of children (who will learn less in school, if they are able to attend) and adults (in their jobs) will suffer.

There are many other areas that will need rebuilding or reform. The tax system provides an unusually low relative level of taxes (4.5% of measured GDP) and even if non-tax revenues of 3.3% of GDP are added in, there is very little spending on health or

[9] 1997 Household Income and Expenditure Survey, Central Statistical Organization, Yangon, 1999. The data come from pages 167-168.
[10] See "Myanmar: The HIV/AIDS Crisis" by the International Crisis Group, April 2002.

education. Any government hoping to create a pro-growth climate would need to work on both the income and expenditure side of public finances.

Government ownership is extremely high – nearly 100% in energy, power, and communications, half in forestry and over three-fifths in construction. If cooperatives are counted with government, financial institutions are nearly three-quarters public. Even trade, transport, and manufacturing are 20-30% publicly owned. Economic performance of these sectors is modest by any standards. Telephone charges, for example, are among the highest in the world. Power outages are frequent and lengthy. Commercial energy use per capita is less than Nepal or Mozambique and has been growing slowly in the last decade, especially considering the low initial levels. (Vietnam's electricity growth is about twice as high.) Domestic credit provided by banks is 29% of GDP – less than in 1990, and one quarter of the relative level in Thailand. Transforming these sectors will be difficult and take time.

Though it is seldom mentioned, it will also be necessary to build up again the habit of using law to resolve problems. The nature of recent government has been such that local commanders have had to provide for their troops, and this has led to many *ad hoc* charges or taxes. These are hard to predict, difficult to appeal, and very uneven in their impact. An impartial judiciary seldom decides commercial differences in these conditions. If higher quality FDI and a larger volume of domestic investment are to be attracted, it will be necessary to shift gears from an emergency to a "normal" environment.

While Burma had been one of the best performing economies in both social and economic terms in the 1950's, its long isolation and intermittent civil wars have created an enormous backlog and deficit in most areas of life. Capital in many areas needs to be modernized, improved, and reoriented. Human capital is poor. "Soft" public capital in terms of administrative competence and trust is degraded. Private capital is well behind neighboring nations. There are few firms that are truly competitive, and able to incorporate new technology and modern management. It is quite possible that a humanitarian crisis will appear or is appearing. Rectifying these problems cannot be undertaken in the current stalemate, or by any government that lacks international and domestic legitimacy. If the stalemate continues, the society will come under further strain and perhaps show clearer signs of disintegration. Or perhaps foreign influence will grow to such an extent that national viability will be thrown into question. In any case, the world is moving faster and the costs of the current immobility are becoming extremely high.

Note on Data:

Because of the poor quality of data, I have not even inserted the usual data tables into this brief paper. Those interested can go to websites with the Asian Development Bank's country survey and tables, the IMF publications on Myanmar (most recent is in 2000), and the World Bank. [www.adb.org ; www.imf.org; www.worldbank.org] Some navigating around each website is necessary, but they all have data on Burma/Myanmar.

The UN agencies in Myanmar have produced perhaps the only real reports, some based on surveys with the government such as the Multiple Indicator Cluster Survey 2000, and the related Myanmar Human Development Report. They are not available online.

The International Crisis Group has two April 2002 publications on Myanmar. One is a briefing on the HIV/AIDS situation and one a report, *Myanmar: The Politics of Humanitarian Aid* in which they argue socio-economic conditions are deteriorating to a dangerous extent. (At www.crisisweb.org ; click on Asia and Myanmar/Burma)

Appendix 3: Signs of Distress: Observations on agriculture, poverty and the environment in Myanmar

Talk delivered by Debbie Aung Din Taylor, Economic Consultant
November 22, 2002 Conference on *Burma: Reconciliation in Myanmar and the Crises of Change,* School of Advanced International Affairs, Johns Hopkins University, Washington, D.C.

A recent news story from Myanmar describes groups of rural women and children gathered along the roadsides, forcing buses passing by to stop, and pleading for food and money. Upon seeing the crazed and desperate looks on the villagers' faces, the passengers and drivers were too afraid to refuse to help. There are also recent reports of people searching for food and looting rice warehouses in several townships. In Yangon, hungry children sit outside people's houses, waiting for the cook to come out and fill their tin cups with rice water that's normally thrown away. Are these isolated instances of hunger or is there a widespread problem in Myanmar?

My message today is that *much* of the population in Myanmar is hungry and poor because both the agriculture sector and the natural resource base upon which it depends appear to be collapsing. Poor people are in grave danger of losing their livelihoods and lives, and urgently need to be protected against these threats.

Why should we be concerned about the possible collapse of agriculture? Because the sector makes up over half the country's GDP and employs about 2/3 of the labor force. There are some 4.5 million farm households in Myanmar and over 85 percent of them cultivate small plots of land less than ten acres in size, which is considered to be subsistence-level. Many of the rural poor are also landless families who work as casual laborers directly on farms. If agriculture, Myanmar's key sector, is in trouble, both the country's food supply and the livelihoods of millions of people will be threatened.

The observations I will make on Myanmar's agriculture, hunger, poverty and the environment are based on field work done in dozens of villages over the last seven years, where I researched farming systems, analyzed rural investments, assessed socio-economic conditions, and evaluated rural aid projects in both the central and more remote parts of the country. I have traveled in the Ayeyarwady Delta, Sagaing, Magway, Mandalay and Bago Divisions, and the Shan, Kachin and Rakhine States.

My visits and research have led me to the conclusion that most people in rural areas are much worse off today than a decade ago. I've observed some disturbing trends; farmers are using less and less fertilizer, families are abandoning farming and becoming

landless, yields of key crops like paddy and sesame are declining and rice prices are rising. In June of this year, I saw signs of imminent distress in villages that were not there five or six years ago; now, crops are failing altogether, more children are dropping out of school, large numbers of people appear to be criss-crossing the country in search of paid work, and farm families are going hungry on one meal a day consisting of rice gruel. These disturbing signs indicate that agriculture is not sufficiently productive to sustain a healthy population, and appears to be moving in a downward trend.

Why does food production in Myanmar appear to be in trouble? Although quantitative information is sparse, there is sufficient evidence to suggest three main reasons for declining agricultural production. These three reasons are: inadequate credit, unstable and restrictive market policies and mandatory cropping. Together, these three conditions act as powerful disincentives to national production.

First, farmers have had little credit available to them so they have not been able to invest in new crops and technology to improve production. The loan amount Myanmar farmers receive from the Agricultural Development Bank buys less than a quarter of a bag of fertilizer per acre, when paddy farmers typically need two bags per acre. The available credit amounts to less than $1 per acre; in Vietnam, it's over $16. So farmers have had to rely on the only other credit sources available to them, which are informal moneylenders, traders or millers who typically charge 10 to 15 percent interest per month. With such high credit costs and an inability to control production or forecast prices, farmers feel it's too risky to borrow – so their production and incomes remain low.

The second disincentive on agricultural production is that unstable and restricted market policies impose large tax burdens on farmers and suppress farm-gate prices for their output. Even during the years when weather and harvest are good or when world commodity prices are high, Myanmar farmers have not necessarily been able to reap the benefits. For example, paddy farmers must sell a fixed paddy quota to the State at about half the market price, regardless of the amount they produce. Their incomes are further suppressed because rice export markets are closed (except to the State and a few entrepreneurs), which means they can't benefit from higher international market prices.

Markets for agricultural products are not only restricted, they've also been unstable. Where export markets for some products have been open, they have frequently been subject to ad hoc closures. For example, a few years ago, hundreds of farmers in the Dry Zone –Magway area- suffered severe losses at harvest time when the sesame export trade was abruptly closed. The price of sesame dropped drastically and farmers were forced to sell at a loss. Shortly after, the trade ban was suddenly lifted and sesame

was again selling at higher prices. But the damage to farm incomes had been done. Farming is a risky enough business that farmers cannot survive without the benefits of reliable and profitable markets.

The third disincentive on agricultural production is that in some key agricultural regions, farmers have had little choice about when and what crops to plant. Farmers are instructed to grow certain industrial crops, such as sugarcane, jute and cotton. I'll explain what's happening in the Delta, the country's "rice bowl". There has been an aggressive effort since 1992 to push double and triple cropping of rice. Farmers there are prevented from growing other nitrogen-fixing and more lucrative crops during the dry season, such as mung beans. Without proper irrigation, drainage and inputs, this intensive monocropping of rice has caused water logging, salt intrusion during the late monsoon and dry season, and forming of acid sulfate soil, all of which lead to severe soil degradation. Draft animal power has grown weaker because of the scarcity of fodder. Weeds, pests and plant diseases previously unknown to the area have also emerged. All of this is culminating in drastic drops in yields. In some townships, an estimated 40 percent of farmers last year faced the impossible dilemma of harvesting less than what they owed to the State. To deliver their required quota, farmers had to buy paddy from the market with money borrowed at exorbitant rates. Their inability to feed themselves is compounded by debts they cannot hope to repay.

So farmers in Myanmar have not had much opportunity to respond to meaningful incentives that would allow them to improve their production and incomes. Instead, farmers have suffered repeated, debilitating financial losses and are less and less able to recover from these losses.

The decline of the agriculture sector appears to be eclipsed by a more worrisome crisis now. This related crisis has to do with the condition of Myanmar's natural resource base – its land, forests and rivers - on which food production and the livelihoods of present and future generations depend. Simply put, the natural resource base seems also in danger of collapsing. Natural resources are a kind of "capital", and this capital is getting used up in ways that are either costly to recover or in some cases, possibly irreversible.

Let me explain some of the ways the natural resource base is deteriorating. When farmers can't improve their land or soil, they eventually wear it out. For example, in the Dry Zone region where sesame is grown, farmers haven't been able to rehabilitate their soils for years. So soils have become degraded and fragile. In fact, there's very little organic matter going back into them, because villagers have resorted to burning crop wastes and even cow dung as fuel, to cope with the shortage of firewood and other fuels. By converting natural fertilizer into fuel, the ecological cycle is being cut short. I

recently saw farmers, tilling rows of sesame in what looked like the sand at the beach! Farmers in that township said their sesame yields had dropped in half in the last few years, from an average of 10-12 baskets per acre to only 5 or 6 baskets.

Because farming has not been productive enough to generate incomes and jobs, the rural poor have had to increasingly look for jobs off the farm. These off-farm job opportunities are very limited in the rural economy. So poor families supplement their incomes by relying directly on common or "free' natural resources. They cut and sell firewood, catch crabs and fish, pan for gold, jade, or mine gems or gather barks and medicinal plants to sell. However, these natural resources are quickly becoming depleted due to mounting pressure from both a growing, needy population and from more powerful, unregulated groups who extract those same resources but on a larger scale.

The more the environment is used up by this "mining" of the land, trees, fish and other resources, the more frequent and severe floods, droughts and other natural disasters will be. Catchment areas of the country's major rivers like the Chindwin and Bago rivers have become denuded of forest cover, contributing to more violent and prolonged flooding of farm communities downstream. Villages in Chin and Shan States have recently suffered severe landslides and soil erosion from extensive cultivation, fuelwood cutting and indiscriminate logging. In the coastal areas, small fishermen are experiencing declining fish stocks, due to over-fishing and destruction of the habitat. There's also less fresh water in coastal wells; in the Delta, I saw villagers spending up to 6 hours, round trip, just to collect fresh, drinking water. Consider that hundreds of thousands, even more than a couple of million of rural households face these kinds of deteriorating conditions, and you get a sense of the ecological and food crisis unfolding around the country.

This crisis in now being fueled by extreme price inflation, brought on by shortages and years of printing money to cover budget deficits. Prices of essential foods like rice and cooking oil rose an average of 200 percent last year. With the average household spending 70 percent of its income on food, dramatic rises in food prices simply mean more widespread hunger, and even starvation.

How are poor families coping with collapsing livelihoods and incomes? Traditionally, village networks have been a source of mutual support for families in Myanmar, but even these safety nets no longer seem reliable, as many families can barely take care of themselves let alone help others. Without the benefit of formal safety nets and relief assistance, poor families typically cope in ways that threaten their health and survival. For example, when poor households are forced to sell productive assets such as plows, oxen or land, they lose both their means of recovery and livelihood. Having children

drop out of school to work severely jeopardizes a family's prospects, and imposes heavy costs, including lost schooling and malnutrition with long-term damage to children. When the poor migrate, they often take up precarious and low-quality jobs in the informal sector far away, and are exposed to debilitating social diseases and dangerous health risks. All of these ways of coping have serious detrimental effects on the human and physical capital of poor rural households. Families become even more vulnerable and exposed to greater risks.

So what can be done to reverse the current trends and reduce hunger and poverty in Myanmar? In the longer term, I believe there's still scope for transforming the agricultural sector by raising the cropping intensity, yields and earnings of the country's millions of small farms, since they've been operating well below their technological potential for decades. These reforms require giving farmers greater access to markets, knowledge and capital. This growth path has been tried and proven by many developing countries over the past 30 years. Neighbors like Taiwan and Thailand invested heavily in agriculture – not just physical infrastructure like roads and small-scale irrigation – but also research and extension, credit, education, health, clean water and nutrition.

The looming crisis however, demands that something be done in the short term. We cannot wait for elusive political changes to come before preventing further hunger, premature deaths, disruption of villages and the creation of refugees over the next few years. Collective action is needed now to create a social safety net that provides poor families with constructive ways of coping with the many threats to their lives.

There are two priority activities that can have the greatest impact on the lives of poor people in Myanmar right now: these are food for schooling assistance and cash/food-for-work public works schemes. Both kinds of assistance can meet the immediate needs of vulnerable communities while creating long-term benefits for the community such as education, rural infrastructure and environmental remediation. The food for schooling assistance can help ensure that children are fed and kept in school. This kind of assistance should not be delayed.

The second priority relief activity – cash/food-for-work schemes -- can directly bring much-needed jobs and incomes to distressed rural communities. Villagers can be employed in building low-cost community infrastructure such as tubewells, soil conservation bunds, small check dams, basic farm-to-market roads in remote areas, water collection ponds and community wood lots. These are a few examples of small, rural investments with potential for high returns. If cash-for-works were to be developed, their likely cost would be relatively small since the main expense would be for wage labor. And going wage rates in the rural areas are less than 50 cents a day.

In designing assistance that maximizes transparency and accountability, we can apply many positive and promising lessons from the field. Experience from other complex political situations shows that we should NOT dismiss relief aid so easily and assume that negative impacts are inevitable. There *are* effective strategies to avoid theft and misappropriation of aid. I believe with careful analysis, oversight, planning and commitment, it is possible to focus this kind of aid in tangible ways that support local communities. It could also provide valuable opportunities to practice good governance at the local village and township levels.

In closing, I'd say it's true there are profound regional differences in Myanmar; some regions are more remote and worse off than others. Despite these differences, I believe there is a common picture throughout the country today, and that is this: population is growing, yields are generally declining, and farm output is becoming more variable and unreliable. Non-farm jobs are scarce and low paying. Access to wood, clean water, fish and other "free" environmental goods is getting more difficult. Life is getting much harsher, less secure and less capable of recovery. *This* is the dilemma most people in Myanmar are in, and unless it is urgently addressed with sustained international attention, the magnitude of these rural problems will soon engulf the country's towns and cities.

My own judgment is that the trends are pervasive and at, or near a critical level. We can only expect to see greater instability, negative economic development, extreme poverty, and further loss of human and physical capital for Myanmar. The question to be asked now is this: how much higher must the human toll go before agreement is reached to do something to reverse the trends? Without deliberate and immediate international support, prospects for building a strong society and nation, or even containing disaster, are bleak.

Debbie Aung Din Taylor, a consultant and native of Myanmar, has been on several UNDP missions to Myanmar since 1995. She co-authored a report for the UN Country Team on Food Security in Myanmar in 2000, served as Deputy Team Leader for independent assessment and evaluation missions in 2000 and 2002, and was a member of the 1999 World Bank mission to assess socio-economic conditions in Myanmar.

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