

The Human Development Initiative of UNDP, Myanmar:

**Targeting the Most Vulnerable
(Updated)**



UNDP Yangon (Myanmar)

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PREFACE

The paper has been initially prepared by UNDP consultant Dr KAS Murshid. Subsequently, the accompanying vulnerability tool was updated in late April 2008 to incorporate gender dimension as advised by the Gender Consultant Ms. Janice Moore.

The paper is based on the consultant's expert knowledge on poverty and vulnerability as well as extensive research of work accomplished under the UNDP HDI programme in Myanmar. In particular, the paper reflects the targeting approach used by the HDI in selecting townships, prioritizing villages for HDI assistance, and targeting the poor and poorest through PRA and related tools. Poverty and vulnerability issues affecting lives of the rural poor in Myanmar have been assessed to establish an operational approach to targeting the most vulnerable.

This work is part of the initiative undertaken by UNDP in the fourth quarter of 2007 to expand the scope of targeting by taking into account poverty dynamics. Such an approach would allow for targeting the rural poor particularly vulnerable to economic, education, health, environmental shocks, local economic and administrative arrangements, conflicts and other similar issues that affect livelihoods of the rural poor.

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1. CONCEPTUAL FRAMEWORK

Myanmar is a country of great diversity in terms of topography, agro-ecological zones, cropping patterns, ethnicity, natural resources, and consequently in the livelihood patterns of the population. Agriculture remains the dominant sector accounting for over 50 percent of GDP while extractive industries (mainly oil and gas, gems, timber) provide the bulk of foreign exchange earnings. The country has steadily been opening up to regional trade and investments in recent years and has seen modest growth rates in GDP per capita. Despite significant economic progress, large sections of the population remain vulnerable to both systemic and idiosyncratic shocks that adversely affect household welfare, including livelihood shocks, consumption, health, savings and command over resources/assets.

The UNDP in Myanmar recognizes these weaknesses in the largely rural economy. Its main response to the acute poverty condition in Myanmar has been to address rural poverty through a “Human Development Initiative” covering primary health care, environment, HIV/AIDS, training and education, and food security. A central strategy has been to support local communities in their efforts to organize and strengthen local level institutions like the self-reliance groups (SRG) and user groups. Using the SRG as focal points, HDI interventions have covered agricultural land development, land productivity, income generation activity, micro-finance, health-nutrition and education services, water-sanitation, HIV-AIDS prevention, and small scale rural infrastructure projects. These interventions are addressed at the village level, and covers: (a) the entire community, and (b) the poor/poorest of the poor.

HDI - Targeting Approach Used

1. Identification of geographical locations or areas with high poverty rates at the township level;
2. Identification of village tracts (VT) and villages with high rates of poverty;
3. Use of PRA techniques to identify poor households within a village.

The Vulnerability Dimension

The HDI focus on the poor and the poorest implicitly assumes that these groups are the most vulnerable and have very limited capacity to cope with or adjust to shocks (floods, drought, death of earner, illness etc.). This assumption cannot be faulted. However, measures of poverty used in identifying the poor often ignore the dynamic elements of poverty, and could therefore result in a less effective set of interventions. An anti-poverty strategy should take into account the dynamic elements of poverty quite explicitly. As suggested by Gunther and Harttgen 2006, poverty may be caused by poverty risk (i.e. high uninsured income fluctuations): a poor person today may become tomorrow’s poorest, or a better off household today may fall into poverty tomorrow. Thus Chaudhri 2003 shows that in Indonesia 22 percent of the population was poor but 45 percent faced vulnerability to poverty. Similar evidence has been generated from elsewhere (see Del Ninno and Marini). The core distinction between vulnerability and poverty is risk, and an effective anti-poverty strategy should be based on intensity of vulnerability to poverty.

One can put forward several reasons for directly assessing vulnerability:

- Vulnerability is forward looking
- It distinguishes between ex-ante poverty prevention interventions and ex-post poverty intervention policies
- It has instrumental value:
 - Micro level coping strategies could lead to greater intensity of poverty (Morduch 1995, Barrett, 1999)

- Macro level shocks (recession, inflation) could intensify vulnerability
- It measures the future (ex-ante) risk faced by households and is therefore a better indicator of household well-being
- It identifies households facing low and high consumption variation and helps in distinguishing not only poor households but also those likely to fall into poverty.

It has been observed however, that correlates of poverty and of vulnerability are very similar, including large family size, high dependency ratios, illiteracy, poor public services, poorer regions of the country, female households etc. This suggests that anti-vulnerability measures, to a large part, will be quite similar to anti-poverty measures. The difference arises from the fact that the groups selected for targeting may differ, depending on whether we use a poverty lens or a vulnerability lens. However, for a given country or regional context, the precise set of measures to fight vulnerability or poverty must be based on the specific empirical context.

Vulnerability has been defined differently by different people (see Hoddinott and Quisumbing, 2003 for a review). A recent exercise conducted by Ghimire (2007) for UNDP, Myanmar adopted a definition that encompasses risks faced and coping ability of households to assess vulnerability. The coping mechanism itself could further aggravate (future) poverty, however – e.g. distress sale of animals or assets to cope with under-consumption, which in turn affects future incomes or earnings. Therefore, a modified definition is likely to be more relevant, where vulnerability is defined as poverty (using conventional measures, e.g. a calorie norm) plus an assessment of risks faced. In addition, poverty-neutral coping measures or coping ability at the household level would add value to our understanding of vulnerability. For those who are poor, these coping mechanisms are likely to flow, not from individual or household characteristics but from public services, safety nets or social networks/institutions available at the community level.

Thus, our definition of vulnerability is in terms of the combination of poverty, risk and poverty-neutral coping capacity:

- Poverty/food-poverty status of a household measured using conventional norms
- Risks to income and consumption faced by the poorest, the moderate poor and the marginal non-poor (ex-ante fears and worries about food/livelihoods)
- Poverty-neutral coping measures available

Risks

Risks arise from the probability of shocks to consumption and incomes, usually of the following types (Tesliuc and Lindert):

- Agricultural shocks (drought, bad harvests, pests, low prices, seasonality)
- Idiosyncratic shocks: e.g. job loss, accident, death, asset loss
- Social shocks: conflict and violence, land disputes, theft etc.
- Covariate economic shocks¹: related to recession, inflation, mass-closures of factories etc.
- Natural shocks: earthquakes, cyclones, floods
- Health and Diseases (HIV, Avian Flu, drugs)
- Adverse coping strategies that are unsustainable (e.g. distress sale of capital assets).

¹ These are economy-wide shocks that affect all households simultaneously.

These risks arise from several levels: national level, regional level, village level, and household/individual level. The agro-ecological-geographic context within which a particular shock takes place is likely to be very important for a country like Myanmar, given the sharp regional variation in terms of livelihood regimes found (e.g. dry zone, delta, remote mountains and border areas). Thus, any analysis of vulnerability in the country must take explicit account of the spatial-regional dimension of risks faced, both natural and man-made.

2. PROFILE OF RURAL VULNERABILITY

In terms of our framework of vulnerability, it is important to begin the analysis with poverty. For the country as a whole, 32 percent of the population is estimated to be poor (UNDP/MOP/UNOPS 2007) with rural poverty being significantly higher at 36 percent and urban poverty at 22 percent. In terms of food poverty, the overall figure is 10 percent (rural 11 percent and urban 6 percent).

Table 1: Rural Poverty and Food Poverty Rates by State/Division (rural)

| State/Division | Poverty (%) | Food Poverty (%) | Rank Poverty | Rank food Poverty |
|--------------------|-------------|------------------|--------------|-------------------|
| Kayin | 12 | 2 | 1 | 1 |
| Yangon | 17 | 5 | 2 | 4 |
| Mon | 21 | 4 | 3 | 2 |
| Sagaing | 27 | 5 | 4 | 3 |
| Ayeyarwaddy | 30 | 7 | 5 | 5 |
| Bago (E) | 30 | 8 | 6 | 6 |
| Bago (W) | 34 | 10 | 7 | 7 |
| Kayah | 38 | 13 | 8 | 10 |
| Tanintharyi | 37 | 12 | 9 | 8 |
| Rakhine | 41 | 13 | 10 | 9 |
| Mandalay | 45 | 17 | 11 | 14 |
| Shan (S) | 44 | 14 | 12 | 12 |
| Magwe | 44 | 14 | 13 | 11 |
| Kachin | 47 | 17 | 14 | 13 |
| Shan (N) | 55 | 23 | 15 | 16 |
| Shan (E) | 56 | 22 | 16 | 15 |
| Chin | 81 | 49 | 17 | 17 |
| Union | 36 | 11 | | |

Source: UNDP/MOP/UNOPS 2007

The correlation between food poverty and poverty is extremely high but in terms of vulnerability analysis, food poverty needs to be given greater weight – this group can also be thought of as the extreme poor and may well approximate the relative measure of “poorest of the poor” adopted by HDI. It is important to decide on an arbitrary cut-off point at this stage. One possibility is to take the average food poverty rate as our cut-off point – which in this case would be 11 percent for the country as a whole. To be somewhat generous, we can adopt the figure of 10 percent as our food-poverty cut-off point corresponding to 34 percent as the poverty cut-off point – given by the S/D in bold in Table 1. Clearly, such a procedure will result in ignoring large numbers of poor people living outside of these areas. If more disaggregated information on food poverty was available (e.g. at the Township level) then a cut-off point based on township-level data could have been attempted, to take account of this bias.

In addition to poverty and food poverty, it would be important to introduce agro-ecological zones and other regional characteristics, e.g. high degree of Internally Displaced Persons (IDP), conflict, rapid natural resource degradation, HIV, drought, as additional criteria for selecting vulnerable areas.

It may be mentioned at this stage that there is a high degree of overlap between the HDI areas and the areas identified above as being food poor. However, there are notable deviations. Thus, Kayin which has the lowest poverty rate in the country is represented in the HDI with one township. However, this township is close to Kayah State where poverty rates are high and with which it shares similar poverty characteristics. Likewise, the relatively better off Mon State and Sagaing Division are represented with 3 townships each, while Ayeyarwaddy has 9 townships. These appear to have been justified with reference to certain risks faced (HIV, drought, floods etc.). In the absence of data disaggregated by townships, such apparent “outliers” are difficult to validate.

HDI covers mostly Southern Shan (S) State and two townships in Northern Shan State. Eastern Shan is not covered because the area is already under numerous development programmes of other NGOs. However, from Table 1 we note that Shan (N) and Shan (E) are two of the poorest states in Myanmar.

Thus, the overall picture suggests that HDI has tended to go to the poorer and more vulnerable areas although coverage has been uneven. Thus, non-poor S/D have received significant attention with a total of 16 townships covered out of 57 (Ayeyarwaddy 9, Kayin 1, Mon 3 and Sagaing 3).² Bago W., Shan, E. and Tanintharyi have been completely ignored although apparently quite poor.

For future programming, it is important to focus more intensively on the poor areas, and especially on those areas where the probability of external shocks are likely to be high. In particular, the situation of Bago (W.) and Tanintharyi needs to be re-examined in terms of their vulnerability status while care must be taken to ensure that if non-poor areas are taken up, it is due to high levels of livelihood risks among the population. It would be useful to establish a risk index or at least a risk ranking for townships which could then be used along with poverty and food poverty rates, to select vulnerable areas for project interventions. Elements of such an index would include proportion of population affected by different types of risks, and the probability of occurrence of each type of shock and its intensity. An indirect way of encapsulating all risk factors affecting livelihoods would be to look at consumption and income variability over time, for which ideally, time series data would be needed for each state/division (S/D). In the absence of time series data, cross section variability could be used as an approximation, under the assumption that cross-section variability is likely to capture some dynamic risks as well.³

² A few additional townships have now been incorporated, taking the total; up to 60 as of January 2008.

³ The most commonly used approach to assess variability has been used by Chaudhri (2001, 2003), who first corrected for the problem of heteroskedasticity (in which the error term is correlated with one or more explanatory variables in a regression equation, thus violating the assumption of normally distributed errors) that is usual in cross-section data, and then assessed vulnerability with reference to a poverty line bench mark using consumption expenditures. Apart from giving vulnerability estimates from cross-section data, the approach is able to identify non-poor households at risk. The method will obviously not be able to capture national or regional level shocks.

Table 2: Types of Vulnerability by Poor and Non-Poor S/D

| State/Division | No.* | Floods/ drought /salinity /storms | Malaria /HIV/TB | Erosion/Land degradation/ deforestation | IDP/Conflict /Trafficking | Poor resource base (land, water) | Remote/ Poor transport Etc. |
|--------------------------------|------------|--|--------------------|---|------------------------------|---|--------------------------------------|
| Non-poor S/D | | | | | | | |
| Kayin (1) | 1 | | X (HIV) | | | | |
| Yangon (4) | | | | | | | |
| Mon (2) | 3 | X | | | X (Insecurity) | | |
| Sagaing (Dry Zone) – (3) | 3 | X | | | | | |
| Ayeyarwaddy (Delta) – (5) | 9 | X | | | | | |
| Bago(E) – (6) | | | | | | | |
| Poor S/D | | | | | | | |
| Bago(W)- (7) | | | | | | | |
| Kayah (10) | 1 | | | | X | X | |
| Tanintharyi (8) | | | | | | | |
| Rakhine (9) | 7 | X | X | X | X | | X |
| Mandalay (Dry Zone) (14) | 3 | X | | | | | |
| Shan (S) (12) | 6 | | X | X | | | |
| Magwe (Dry Zone) (11) | 7 | X | X | | | X | |
| Kachin (13) | 7 | X | X | | | | X |
| Shan (N) (16) | 2 | | X | X | | | |
| Shan (E) (15) | | | | | | | |
| Chin (17) | 8 | X | X | X | X | | X |
| Union | 57 (60) | | | | | | |

*Source: Based on UNDP/MOP/UNOPS 2007 and UNDP 2006. * refers to townships; Shaded areas refer to HDI townships; X denotes occurrence. Figures in brackets are food-poverty ranks (1=lowest).*

A vulnerability profile also needs to address questions of *who* and *why*, in addition to *where*. Some relevant information is available from an HDI vulnerability profiling exercise on their clusters, and is indicated below (Ghimire 2007).

Table 3: Identifying Vulnerable Groups

| Non-poor S/D | Who |
|---------------------|--|
| Kayin | Young people |
| Mon | Community/women |
| Sagaing (Dry Zone) | Landless and marginal farmers; People along riverside |
| Ayeyarwaddy (Delta) | Fishermen/fisheries workers; marginal farmers and agricultural workers; households in flood prone areas |
| Poor S/D | |
| Kayah | IDP, women, children |
| Rakhine | Farmers, fishermen, inhabitants of low-lying areas/riverbanks; fish pond owners, casual labourers; Muslim community, poor; fire-wood collectors |
| Mandalay (Dry Zone) | River side residents, landless, marginal farmers |
| Shan (S) | People in high rainfall area/soil erosion area; households with malaria or HIV |
| Magwe (Dry Zone) | Landless/marginal farmers; truckers, boatmen, workers (timber processing/oil fields); migrants, students, sex workers |
| Kachin | Goldmine workers, loggers, timber smugglers, truckers, drug addicts, migrants, seasonal labourers; low land population; farmers |
| Shan (N.) | As in Shan (S.) |
| Chin | Travellers/migrants; general population; poor/poorest; truckers; traders; farmers |

Source: Ghimire 2007.

The *why* question pertains to sources of risk (or causes) at the level of S/D, which relate to weather, environmental degradation, disease (HIV, malaria, TB), natural resource availability and access, crop damage, trafficking, drugs, internal displacement, water availability and social insecurity. Clearly, many of these are covariate risks that affect everyone in the local community and can thus intensify poverty further.

The types of coping measures that have been identified include the following:

- Small infrastructure construction to dam flood waters
- Help from religious groups/Church/NGOs/Government department
- Traditional treatment
- Help from relatives
- Better agricultural technology
- Share food
- Alcohol making
- Community wood lot
- **More time fetching water**

- **Credit**
- **Sell animals**
- **Advance labour sale**
- **Borrow food (rice)**
- **Migration**

The coping responses displayed in bold letters are very likely to have adverse effects on households in the longer run by essentially gaining short-term reprieve in exchange for a much weaker socio-economic status in the future. In fact these types of adjustments may be thought of as additional factors that lead to further vulnerability of households to future shocks, and thus could point to ex-ante vulnerability.

3. TARGETING THE VULNERABLE: AN OPERATIONAL APPROACH

Townships

The HDI has already identified the townships where it would like to work. If it wishes to expand further into additional townships, a vulnerability assessment or at least ranking will need to be made, as indicated above. This however, is likely to be constrained by data availability.⁴ In practice, township selection is a complex process in which the Government, historically, has played a significant role. Selection of townships have also been made in the past, on the basis of pre-existing UNDP projects in certain areas, e.g. like the Dry Zone and Delta. The current practice with respect to township selection is set out in UNDP (2006) which essentially entails looking at available data (e.g. on health, education, agriculture, migration patterns etc.), consultations with government officials and validation through reconnaissance visits to randomly selected villages. The method appears to work well enough, and thus should be retained.

Village Tracts (VT) and Villages

The second task for targeting is selection of villages. Given the availability of secondary data at the VT level, it would be useful to assemble this data and preferably enter this into a GIS map.⁵ The available data appears comprehensive (agriculture, infrastructure, health, education) although the quality of this data may be questionable. These, nevertheless, can be used to provide a preliminary sorting and ranking of VTs from which villages are to be selected. It would be necessary to begin the village selection (and VT validation) process on the basis of local knowledge (discussion with HDI field staff, local government officials from the relevant line ministries, NGO workers, and village representatives). The broad criteria would be to identify poverty and risk factors in operation. A set of indicative questions to aid in village selection is provided below. A score or weight should also be attached to each question in terms of a simple 3 point scale (low, medium, high).

⁴ The HLCA data may provide a basis to assess township level vulnerability although it is unlikely that the sample used was designed to be representative at the township level. Government also has data at the township level which can be combined with subjective assessments and discussions with local stakeholders to arrive at a decision.

⁵ This consultant was able to see VT level GIS maps with a well-known local consultancy house.

Table 4: Selection of Villages by Assessing Poverty/Risk Factors

| Indicative Poverty/Risk Factors | Weight (low=1, medium=2, high=3) |
|---|----------------------------------|
| <ul style="list-style-type: none">• Man-land ratio; landlessness, population density;• Agricultural and natural resource endowments; agricultural productivity, irrigation, food surplus-deficit, cropping intensity• How acute is seasonality in production, consumption, employment, wages, earnings• Agricultural instability (due to drought, floods, input scarcity etc)• Migration/internal displacement• HIV, malaria, TB, drugs• Social and other conflict that threatens livelihoods• Poorly operating markets (labour, food etc.)• Remoteness, poor infrastructure, poor services• Restrictions on cultivation, labour movement, movement of goods, forced labour• Levies, fees, taxes (formal/informal)• Livelihood opportunities• Access to services, health, education | |

Villages selected on a preliminary basis would then need to be subjected to a PRA or RA to validate/finalize selection. The capacity of the HDI field staff to undertake this kind of activity is good. The current practice, it would appear, is quite similar to that outlined above.⁶

Household Selection

The HDI strategy, under its ICDP component is to target the poor, very poor and the poorest (POP). These include marginal farmers, the landless, those with few livelihood assets, the food insecure, those lacking in skills, and those who suffer from chronic illnesses and disability. Target beneficiaries under the CDRT programme include poor communities in 26 remote border townships in Kachin, Chin, Kayin/Mon, and Rakhine states. From a vulnerability perspective, the poor and the POP are certainly vulnerable and needs to be targeted. However, there may be other non-poor, vulnerable groups in the community whose needs may require special attention, e.g. those with HIV or other serious diseases that pose severe public health risks, or people driven into penury through indebtedness, gambling, poor crops, agricultural land degradation or livelihood shocks.

An attempt thus needs to be made to conduct an independent vulnerability mapping that pays particular attention to uncertainty and risks faced by households with a view to identifying those most likely to (a) remain trapped in poverty or remain POP, and (b) fall into poverty or extreme poverty (POP). At the same time, it may be possible to also identify those poor and POP households who are more likely to move out

⁶ Understood from discussions with UNDP programme and HDI project staff.

of poverty. **The key difference between wealth ranking and vulnerability mapping is the added attention to ex ante risk in the latter.**

It may be noted that both approaches are likely to generate a large number of households that are common to both sets. In addition, there may be non-overlapping sets of households who are in one set but not the other. Thus, we are likely to come up with a classification of households as follows (on the assumption of a 4-point vulnerability scale):

Table 5: Possible Outcomes from Wealth and Vulnerability Ranking

| Poverty/Vulnerability | Not Vulnerable | Vulnerable | Very Vulnerable | Most Vulnerable |
|-----------------------|----------------|------------|-----------------|-----------------|
| Non-Poor | X | 12 | 11 | 10 |
| Poor | ? | 9 | 8 | 7 |
| Very Poor | ? | 6 | 5 | 4 |
| POP | ? | 3 | 2 | 1 |

Thus, households in cells 1-9 in Table 4 above, will be common to both exercises. The advantage of conducting a vulnerability ranking in addition, is greater precision with regard to targeting (cell 1 highest priority cell 9 least). In practice, it may be rather difficult to choose between say cell 3 and 4 or 6 and 9. However, households represented by cells 10-12 will now be identifiable as candidates for potential descent into poverty, and can now be explicitly targeted, while X represents households that require no attention at all – this may be useful to know in the project area. Finally, the question marks relate to households that are unlikely to exist, unless a mistake has been made in conducting the wealth ranking exercise. Households in these cells should generally be ignored.

Vulnerability Assessment: Option I

Table below reviews the major risks and uncertainties likely to be operative in rural Myanmar, and traces the likely impact, responses and adjustments at the household level flowing from these risks. The explicit recognition of sources of risk allows us to think in terms of concrete interventions that could be made. This matrix is indicative and will need to be adapted to the concrete realities of individual villages/households. Potentially, therefore, each household could be assessed in terms of the observed impact/responses given in the second column of the table.

Table 6: Vulnerabilities, Risks, Impacts and Interventions: An Overview

| Sources of Risk/ Vulnerability | Observed Household Impact/ Response | Interventions |
|--|--|---|
| <ul style="list-style-type: none"> • Agricultural shocks (drought, bad harvests, pests, low prices, seasonality) • Idiosyncratic shocks: e.g. job loss, accident, death, asset loss • Social shocks: conflict and violence, land disputes, theft etc. • Covariate economic shocks: related to recession, | <ul style="list-style-type: none"> • Reduced yields, marketed quantities, food stocks, consumption, returns, incomes • Reduced employment, earnings or increased (unplanned) expenditures, dis-saving, asset loss • Asset loss, internal displacement, injury • Loss of employment, high | <ul style="list-style-type: none"> • Technology (irrigation, inputs); insurance mechanisms to support losses; credit • Credit/insurance/safety nets • Local security; conflict resolution mechanisms • Rice banks, safety nets, |

| Sources of Risk/ Vulnerability | Observed Household Impact/ Response | Interventions |
|---|---|--|
| <p>inflation, mass-closures of factories etc.</p> <ul style="list-style-type: none"> Natural shocks: earthquakes, cyclones, floods Health and Diseases (HIV, Avian Flu, drugs) Adverse coping strategies that are unsustainable Seasonality in production, consumption, employment, wages, earnings Poorly operating markets (labour, food etc.) Remoteness, poor infrastructure, poor services Natural resource endowments/CPR: declining access Restrictions on cultivation, labour movement, movement of goods, forced labour, arbitrary levies and taxes; weak property rights Uncertain livelihoods due to poor livelihood assets/poor resource base Household demography (old age, dependency, female-head, young children, family size) Poor water-sanitation; Water sources far away | <p>food prices, lower consumption</p> <ul style="list-style-type: none"> Loss of assets, displacement, injury or ill-health Unable to work, high health expenses Distress sale, distress migration, distress borrowing, advance sale of labour and produce Sharp seasonal drop in employment, income, consumption; forced to borrow, migrate etc. High/Low prices for agricultural goods; inability to find work outside the area/low wages Little access to basic services (health, education); high prices faced; poor market access Little access to CPR/erosion of traditional coping mechanisms dependent on natural resource access Illegal migration, few jobs, low wages, no investment, poor productivity, food insecure, physical abuse, poor human rights Casual wage labourers; children drop out of school/sent to work; distress migrants Low earnings, malnutrition, food insecurity, poor health, education Disease, poor health; Women spend lot of time fetching water | <p>credit</p> <ul style="list-style-type: none"> Reconstruction and rehabilitation Prevention, awareness generation, health services Build capacity; safety nets; credit markets Encourage multiple cropping; irrigation; food banks; credit Improve market access; remove market barriers/controls Develop infrastructure Community managed, sustainable use of NR/CPR; ensure access to poor Remove restrictions; safety nets; basic services, credit, capacity building, infrastructure/irrigation; property rights IG activities, training, capacity development, credit, market access Safety nets; access to services; incentive for education of children Hygienic waste disposal; Safe and accessible water |

At the household level, we are able to observe the impacts felt or the coping responses forthcoming as a result of shocks. These impacts/responses/adjustments can then be assessed for each household, as shown below. The indicators are reproduced from Table 6, and can now be assessed through FGD/PRA so that a weight can be assigned to each. A simple 3 point weight is suggested (1 = most vulnerable; 3= least vulnerable). After systematically going through the list, FGD participants would then need to provide an overall assessment based on all the indicators reviewed. This score can be on a 4 point scale (1=most vulnerable, 4= not vulnerable).

Table 7: Household Vulnerability Assessment Checklist

| Indicator | Weight (scale: 1-3) |
|--|---------------------|
| <ul style="list-style-type: none">• Reduced yields, marketed quantities, food stocks, consumption, returns, incomes• Reduced employment, earnings or increased (unplanned) expenditures, dis-saving, asset loss• Asset loss, internal displacement, injury• Loss of employment, high food prices, lower consumption• Loss of assets, displacement, injury or ill-health• Unable to work, high health expenses• Distress sale, distress migration, distress borrowing, advance sale of labour and produce• Sharp seasonal drop in employment, income, consumption; forced to borrow, migrate etc.• High/Low prices for agricultural goods; inability to find work outside the area/low wages• Little access to basic services (health, education); high prices faced; poor market access• Little access to CPR/erosion of traditional coping mechanisms dependent on natural resource access• Illegal migration, few jobs, low wages, no investment, poor productivity, food insecure, physical abuse, poor human rights• Casual wage labourers; children drop out of school/sent to work; distress migrants• Low earnings, malnutrition, food insecurity, poor health, education• Disease, poor health; Women spend lot of time fetching water | |

Vulnerability Assessment: Option II

A second alternative to the above is also discussed below based on household questionnaire surveys (which will push up costs in terms of time and money).

The heart of vulnerability is risk assessment which can take two forms: (a) investigation of past risks faced with regard to some key livelihood variables or adoption of distress coping measures (e.g. asset sale, credit at high interest) – this was the approach taken in the previous section; and (b) extent of worries about future prospects with regard to the same key variables – this dimension is added to the approach described below.

In this approach, vulnerability assessment is conducted around a few basic themes at the household level:

1. Food security
2. Livelihoods, incomes, earnings
3. Health/disease
4. Distress coping/ Capacity to bear shocks (without weakening productive asset base)

A set of indicative variables are provided below essentially to demonstrate the kind of questions (and the format) to be asked as part of the vulnerability assessment. These questions need to be ranked (here we tried to rank from low to high intensity) so that later, cut-off points can be established or weights attached. The indicators shown in the tables below will need to be treated with caution at this stage as these will need to be validated at the field level through a process of piloting and experimentation.

The data generated by Tables 8-11 can easily be used to mark out the food insecure in terms of say, a 4-point scale. The questions are ordered in a way so that as we move down the list, **the degree of revealed vulnerability and insecurity increases** (i.e. these are ordered indicators). Such a schema can be given quantitative weights, added up and an overall index of vulnerability can be obtained. Thus, the overall score for a particular household is summed across rows. The ordering ensures that those who are, for example, more food insecure will display a higher score.

Food Security

Table 8: Graded Qualitative Indicators of Household Food Security

| Item | Indicator | Frequently 2 | Sometimes 1 | Never 0 | Score |
|------|--|-----------------|----------------|------------|-------|
| 1 | Obliged to eat cheaper food instead of rice | | | | |
| 2 | Needed to borrow food to entertain guests | | | | |
| 3 | Need to purchase food on credit | | | | |
| 4 | Worried frequently about where the next meal would come from | | | | |
| 5 | Need to purchase rice frequently as own stores ran out | | | | |
| 6 | Did not have three meals a day on regular basis | | | | |
| 7 | Had less than three meals a day on a regular basis | | | | |
| 8 | Cut back food consumption owing to lack of food | | | | |

| Item | Indicator | Frequently 2 | Sometimes 1 | Never 0 | Score |
|------|---|-----------------|----------------|------------|-------|
| 9 | Need to borrow food from relatives/ neighbours | | | | |
| 10 | Main earner needed to skip one or more meals a day | | | | |
| 11 | There were time when food stores ran out and there was no money to buy food | | | | |
| 12 | Adults other than main worker had to skip one or more meals | | | | |
| 13 | Children had to skip one or two meals a day | | | | |
| 14 | Children had to skip three meals a day | | | | |
| | Total Score | | | | |

Note: The time reference for each question is the previous 3 months and previous 12-month period while a frequency weight was placed for each question as well (2= frequently, 1= sometimes and 0= never).

Livelihoods, Incomes, Earnings

Table 9: Graded Qualitative Indicators of Livelihood and Income Risks

| Item | Indicator | Frequently 2 | Sometimes 1 | Never 0 | Score |
|------|---|-----------------|----------------|------------|-------|
| 1 | Family is able to meet basic needs throughout the year/have surplus/savings | | | | |
| 2 | Earn enough to meet family needs but no surplus or savings | | | | |
| 3 | Face some difficulty in meeting needs but usually manage | | | | |
| 4 | Very difficult to predict earnings – very worried | | | | |
| 5 | Face significant difficulty and have to borrow at poor terms | | | | |
| 6 | Face great difficulty and have to migrate seasonally or sell asset | | | | |
| 7 | Cope somehow with help from kind people, safety nets, Pagoda etc. | | | | |
| | Total Score | | | | |

Note: The time reference for each question is the previous 3 months and previous 12-month period while a frequency weight was placed for each question as well (2= frequently, 1= sometimes and 0= never).

Health and Disease

Table 10: Graded Qualitative Indicators of Health Risks

| Weight | Indicator | Frequently 2 | Sometimes 1 | Never 0 | Score |
|--------|--|-----------------|----------------|------------|-------|
| 1 | Health expenditures within bearable range | | | | |
| 2 | Experienced a serious illness in family – health expenditure is significant | | | | |
| 3 | Experienced a serious illness lasting more than a month – health expenditure is high | | | | |
| 4 | Worry a lot about health-related costs | | | | |
| 5 | Non-earning family member chronically ill (TB, HIV) | | | | |
| 6 | Earning female member chronically ill (TB, HIV) | | | | |
| 7 | Earning male member(s) chronically ill (TB, HIV) | | | | |
| | Total Score | | | | |

Note: The time reference for each question is the previous 3 months and previous 12-month period while a frequency weight was placed for each question as well (2= frequently, 1= sometimes and 0= never).

Distress Coping Measures Adopted

Table 11: Graded Qualitative Indicators of Distress Coping

| Weight | Indicator | Frequently 2 | Sometimes 1 | Never 0 | Score |
|----------------------|-----------------------------------|-----------------|----------------|------------|-------|
| 1 | Sell poultry or draw-down savings | | | | |
| 2 | Safety nets, micro-credit | | | | |
| 3 | Borrow from money lender trader | | | | |
| 4 | Advance sale of produce, labour | | | | |
| 5 | Sell animals | | | | |
| 6 | Sell land, seasonal migration | | | | |
| 7 | Migrate permanently | | | | |
| Overall score | | | | | |

Note: The time reference for each question is the previous 3 months and previous 12-month period while a frequency weight was placed for each question as well (2= frequently, 1= sometimes and 0= never).

4. CONCLUSION

Vulnerability is best viewed in terms of risks to food security and livelihoods which in turn are affected by many other types of risks related to health and coping behaviour, for example. Two approaches have been presented to assess vulnerability at the household level. The first is a qualitative approach which can be delivered through FGDs while the second combines qualitative and quantitative techniques to yield an aggregate score. This method however, requires generation of field data through a structured questionnaire. Both methods will require extensive field testing before these can be finalized. The indicators set out also need to be validated in the specific context of rural Myanmar. This process of validation, as well as the ultimate choice of the final list of indicators, and the order in which these are asked, are very important methodological issues, and will need to be handled with great care.

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TERMS OF REFERENCE

The **VULNERABILITY CONSULTANT** will work under the overall guidance of the UNDP Deputy Resident Representative (Programme), and in consultation with the Policy Advisor and the National Consultant (Vulnerability Analysis) of the Policy Unit to provide advice to UNDP senior management on vulnerability, poverty and human development issues, national strategies for vulnerability analysis including conceptual framework for vulnerability and tools that could be effectively used for vulnerability and identifying the most vulnerables.

The consultant will consult with the UNDP programme section, Policy Unit, HDI project management, and relevant programme-related functional groups such as the Vulnerability and Gender Group and the HDI Advisory Group.

Background

Since 1994, the UNDP has launched its assistance programme in Myanmar organized within the framework of a Human Development Initiative (HDI) and providing support in the area of primary health care, environment, HIV/AIDS, training and education, and food security to the rural poor. Primarily, the programme target its assistance to the poor in the rural areas, where the incidence of poverty is highest. This programme is placed within the framework of humanitarian assistance that was authorized by the organization's Executive Board or the then UNDP Governing Council in late 1993. Presently, the HDI programme activities are operational in 57 townships, covering 6,500 villages and outreaching about 2.92 million people or 30 percent of the rural population living in these villages.

The UNDP plans to conduct a vulnerability assessment in the HDI programme areas to highlight the socio-economic issues, as well as consequences of environmental changes with the aim of having a better understanding of the risk factors encountered by the rural poor, their ability to cope with such factors, and how the UNDP HDI could address these issues and problems, and to which type of population it should target, and where.

Functions / Key Results Expected

1. Develop a conceptual framework for vulnerability analysis based on the literature review and work of partner agencies in Myanmar.
2. Develop a vulnerability profile based on HDI work including the Poorest of the Poor (PoP) strategy (wealth ranking conducted by ICDP, CDRT, HIV/AIDS and Micro-finance Projects).
3. Develop tools (Quantitative and Qualitative) for vulnerability profiling exercise and analysis thereof.

LIST OF PERSONS MET FROM UNDP, MYANMAR

UNDP Staff

| | |
|---------------------|--|
| Sanaka Samarasinha | Deputy Resident Representative (Programme) |
| M. Shafiquer Rahman | Senior Policy Adviser, Policy Unit |
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| Lawson Sein Tun | Consultant, Policy Unit |
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| Prasong Jantakad | Agency Project Manager, CDRT project |
| Win Myo Thu | The EcoDev Group (consulting firm) |

Attachment 1: Household Questionnaire

Targeting the Vulnerable

| |
|---|
| Zone /State/Division |
| Township |
| Village tract |
| Village |
| .Questionnaire No. |
| Enumerator's name |
| Supervisor's name |
| Date of enumeration |
| Comments (if any) by enumerator or supervisor |

1. Household information

| | | |
|-----|--|----------------------------|
| 101 | Name of Respondent | ----- |
| 102 | Sex of Respondent | Male 1 Female 2 |
| 103 | Who is the head of the household? (State name) | _____ |
| 104 | Relationship of respondent to household head | _____ |
| 105 | How many members are there in your household? | _____ |
| 106 | How many male adults? | _____ |
| 107 | How many female adults? | _____ |
| 108 | How many male children? | _____ |
| 109 | How many female children? | _____ |

| | | |
|-----|---------------------------------------|-------|
| 110 | How many pregnant or lactating women? | _____ |
|-----|---------------------------------------|-------|

2. Household Food Security

| Item code | Indicator | Frequency weight | | | Score |
|--------------|--|------------------|----------------|------------|-------|
| | | Frequently 2 | Sometimes 1 | Never 0 | |
| 201 | Obligated to eat cheaper food instead of rice/eating less preferred foods | | | | |
| 202 | Needed to borrow food (to entertain guests) | | | | |
| 203 | Need to purchase food on credit | | | | |
| 204 | Worried frequently about where the next meal would come from | | | | |
| 205 | Did not have 3 meals a day on regular basis | | | | |
| 206 | Cut back food consumption owing to lack of food | | | | |
| 207 | Adults other than main worker had to skip one or more meals | | | | |
| 208 | Member with primary responsibility for reproductive work had to skip one or more meals per day | | | | |
| 209 | Main earner need to skip one or more meals a day | | | | |
| 210 | There were time when food stores ran out and there was no money to buy food | | | | |
| 211 | Children missed one or two meals per day | | | | |
| 212 | Pregnant/lactating woman in household missed one or two meals per day | | | | |

| | | | | | |
|-----|--|--|--|--|--|
| 213 | Adult males missed three meals per day | | | | |
| 214 | Adult females missed three meals per day | | | | |
| 215 | Male child/children missed three meals per day | | | | |
| 216 | Female child/children missed three meals per day | | | | |
| 217 | Pregnant/lactating woman in household missed three meals per day | | | | |

Note: The time reference for each question is the previous 12 – month period.

3. Livelihoods, Incomes, Earnings

| Item code | Indicator | Frequency weight | | | Score |
|-----------|---|------------------|----------------|------------|-------|
| | | Frequently 2 | Sometimes 1 | Never 0 | |
| 301 | All household members are able to meet basic needs throughout the year/have surplus/savings | | | | |
| 302 | Earn enough to meet family needs but no surplus or savings | | | | |
| 303 | Face some difficulty in meeting needs but usually manage | | | | |
| 304 | Male household members are not able to meet some of their basic needs | | | | |
| 305 | Female household members are not able to meet some of their basic needs | | | | |
| 306 | Very difficult to predict earnings – very worried | | | | |
| 307 | Face significant difficulty and have to borrow at poor terms | | | | |
| 308 | Face great difficulty and have to migrate seasonally or sell | | | | |

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| | | | | | |
|-----|---|--|--|--|--|
| | asset | | | | |
| 309 | Cope somehow with help from kind people, safety nets, Pagoda etc. | | | | |
| | Total Score | | | | |

Note: The time reference for each question is the previous 12 – month period.

4. Health and Disease Risks

| Item code | Indicator | Frequently 2 | Sometimes 1 | Never 0 | Score |
|-----------|--|-----------------|----------------|------------|-------|
| 401 | Health expenditures within bearable range | | | | |
| 402 | Experienced a serious illness in family – health expenditure is significant | | | | |
| 403 | Experienced a serious illness lasting more than a month – health expenditure is high | | | | |
| 404 | Worry a lot about health-related costs | | | | |
| 405 | Workload causes significant health problems for male household member(s) | | | | |
| 406 | Workload (productive and reproductive) causes significant health problems for female household member(s) | | | | |
| 407 | Non-earning family member chronically ill (TB, HIV) | | | | |
| 408 | Household member primarily responsible for reproductive work is chronically ill | | | | |
| 409 | Secondary income earner chronically ill (TB, HIV) | | | | |
| 410 | Primary income earner chronically ill (TB, HIV) | | | | |
| | Total Score | | | | |

Note: The time reference for each question is the previous 12 – month period.

5. Education

| Item code | Indicator | Frequently 2 | Sometimes 1 | Never 0 | Score |
|-----------|---|-----------------|----------------|------------|-------|
| 501 | Some male children do not attend school regularly | | | | |
| 502 | Some female children do not attend school regularly | | | | |
| 503 | Household member with primary responsibility for reproductive work is unable to read or write | | | | |
| 504 | Primary income earner is unable to read or write | | | | |
| 505 | Household member with primary responsibility for reproductive work has not received education or training | | | | |
| 506 | Primary income earner has not received any education or training | | | | |
| | Total Score | | | | |

Note: The time reference for each question is the previous 12 – month period.

6. Access/Control over Decision-Making and Resources

| Item code | Indicator | Frequently 2 | Sometimes 1 | Never 0 | Score |
|-----------|--|-----------------|----------------|------------|-------|
| 601 | Adult male makes majority of and/or final decisions on physical asset expenditures | | | | |
| 602 | Adult females have some degree of involvement in decision-making on asset expenditures | | | | |
| 603 | Adult female has no involvement in decision-making on asset expenditures | | | | |
| 604 | Adult female has restricted access to household physical assets | | | | |
| | Total Score | | | | |

Note: The time reference for each question is the previous 12 – month period.

7. Distress Coping Measures Adopted

| Item code | Indicator | Frequently 2 | Sometimes 1 | Never 0 | Score |
|-----------|---|-----------------|----------------|------------|-------|
| 701 | Sell poultry/small livestock or draw-down savings | | | | |
| 702 | Safety nets, micro-credit | | | | |
| 703 | Borrow from money lender trader | | | | |
| 704 | Advance sale of produce, labour | | | | |
| 705 | Sell animals | | | | |
| 706 | Multiple female children taken out of school to help with productive or reproductive work | | | | |
| 707 | Multiple male children taken out of school to help with productive or reproductive work | | | | |
| 708 | Sell agriculture equipments | | | | |
| 709 | Sell other household assets | | | | |
| 710 | Sell land | | | | |
| 711 | Primary income earner migrated temporarily for work | | | | |
| 712 | All children do not attend school | | | | |
| 713 | Primary income earner migrated permanently | | | | |
| | Total Score | | | | |

Overall score