EVALUATION OF MOST VULNERABLE FAMILIES LISTING PROCESS GTZ KAMPOT, INCLUDING AN OUTCOME COMPARISON WITH OTHER POVERTY IDENTIFICATION MODELS

Center for Advanced Study

Final Report
January
2006

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List of acronyms

ACLEDA
ADB Asian Development Bank
AFH Action For Health
CAS Center for Advanced Study
CC Commune Council
CDC Commune Development Committee
CFDS Cambodian Family Development Services
CIDSE Cooperation Internationale pour le Development et la Solidarite
CIP Commune Investment Planning
DCDT District Community Development Team
DFT District Facilitation Team
GTZ German Technical Cooperation
HEF Health Equity Fund
HH Household
MB Monkul Borey
MVFL Most Vulnerable families List
PBC Planning and Budget Committee
PCDT Provincial Community Development Team
RDP Rural Development programme
SES Socio-Economic Status
SM Sompou Meas
SR Svay Rieng
ToT Training of Trainers
UNICEF United Nations Children Fund
VDC Village Development Committee
VWG Village Working Group
WB Worldbank

Executive Summary

The GTZ assisted Community Based Rural Development Project, in collaboration with partners in Kampot and Kampong Thom provinces, have developed identification mechanisms of the poor at household level and have piloted this instrument within already existing projects.

In 2003 GTZ facilitated a first round of community based poverty identification in Kampot. This resulted in Village and Commune Lists of Most Vulnerable families (MVFL). In 2004 a first update took place. In July/September 2005 a second update, fully integrated into the commune planning process, and using a new set of criteria was facilitated. The process of establishing MVFL is implemented at the village and commune levels by groups of villagers and local authorities under the guidance of Community Development Facilitators and GTZ staff.

In order to verify the accuracy, fairness and reliability of the process and its resulting lists GTZ commissioned an independent evaluation. In consultation with CAS it was decided to use the opportunity of this evaluation to also create input for the wider goal of the development of a standardized approach that effectively targets the poor and can be implemented across the country.

The major **objectives** of this evaluation are to ascertain whether the:

1. Updating **process** has been executed as intended?
2. **Outcome** of the process is accurate?
    - An independent thorough check on the number of false inclusions on the updated MVFL list in a selected number of villages (how many of the families on the list should not be on that list)
    - An independent thorough check on the number of false exclusions on the updated MVFL list in a selected number of villages (how many of the families not on the list should actually be on that list)
3. There exists a possible **relationship between process and outcome**, the extent to which the intended updating procedure is followed and the quality (i.e. number of false inclusions and exclusions and the differentiation between extremely and very poor HHs) of the resulting lists.

And to provide:

4. **Empirical input for discussions on harmonization of poverty identification criteria** by testing the use of a more elaborate set of criteria on individual HHs; and providing GTZ with a dataset of raw information potentially relevant for assessing Socio-Economic Status (SES) from various sectoral perspectives (health, education, agriculture, land, water supply,…)

The process assessment included a weeklong observation phase in July 2005. The survey was conducted from late August through the third week of September. The survey covered five villages in 5 communes in 5 districts in Kampot in a purposive sampling scheme. In each village around 100 households were interviewed: all HHs on the MVFL that the survey team could contact complemented by HHs not on the list but identified as poor by village leaders. Village Working Groups had scored HHs on a list of criteria and these scores resulted in HHs being either classified as extremely poor or very poor and entered on the MVFL or as not (very) poor and not entered on the list.

The survey results are not statistically representative for the MVFL process in Kampot province as a whole.

The table below describes the sample of interviewed HHs. The **Listed HHs** refers to the HHs on the MVFL. For the HHs on the MVFL, only partial information was available about their VWG scores. For three villages scores were available for nearly all listed HHs, for one village only scoring info for half of the listed HHs was available, and for one village all scores had been lost. The row for **HHs scored** shows the number of listed HHs for which we had scores. Of the HHs on the MVFL we could interview most: see **Listed HHs interviewed** (some had moved away permanently or temporarily, or were not found at home despite several call-backs). The last row gives the numbers for the **Listed HHs with a score** that the CAS team was able to **interview**.

Table I: The sample characteristics

District	**Kampot**	**Dong Tung**	**Chhuk**	**Chumkiri**	**Kampong Trach**
Commune	**Trapeang Sangkae**	**Sraechea Cheung**	**Daun Yoy**	**Chumpuvorn**	**Kanthor Keut**
Village	**Trapeang Thom**	**Prey Pi**	**Krasang Meanchey**	**Thmei**	**Damnak Kralanh**
Total HHs	**267**	**221**	**311**	**218**	**113**
Listed HHs	**43 (16%)**	**46 (21%)**	**111 (36%)**	**53 (24%)**	**27 (24%)**
VWG scores of HHs available	**40**	**43**	**110**	**0**	**14**
Listed HHs interviewed	**35**	**42**	**89**	**46**	**24**
Non-listed HHs interviewed	**67**	**63**	**12**	**54**	**76**
Interviewed HHs as % of Total HHs	**38%**	**48%**	**32%**	**46%**	**88%**

The survey instrument was designed by CAS and had a dual purpose. Firstly to check the quality of the poverty assessment by the Village Working Groups. Secondly, to compare the assessments arrived at by applying the Kampot MVFL criteria with assessments based on a set of alternative poverty pre-identification methods (mainly equity funds schemes implemented by different providers). These alternative schemes or models differ from the Kampot MVFL both in terms of the *process* followed to arrive at lists with poor HHs and the *criteria* used to guide the identification. The comparison attempted in this study *only* looks at the *criteria*.

Table II Alternative models included in this study

Model	**Identification done by**	**Interview**	**Nr of criteria**
Kampong Thom MVFL	Village Working Group	Not face to face	8
CFDS Monkul Borey	NGO staff	Face to face	12
CFDS Sompou Meas	NGO staff	Face to face	12
AFH Mung Russey/Chlong	Village volunteers	Face to face	15
Kirivong OD	Health Centre management Co.	Mainly face to face	6
UNICEF Svay Rieng	Village health volunteer	Face to face	9

The main results

Regarding the process of updating the Most Vulnerable Families Lists

- Perceptions of the usefulness of the identification process included:
  - So far the lists have not yet brought real benefits improving the situation of the poor(est) families, not in economic terms nor regarding social aspect (health service, education etc.)
  - Nevertheless, hope is evident that it will bring some benefit to the village sometime in the future
  - Especially in villages where NGOs have been active for a longer time the lists are used to encourage villagers to strengthen mutual help and to develop more understanding for extreme poor families (e.g. CIDSE in Khlai and Thmei villages)
- Repeating bears fruit. Villagers understand and accept the MVFL process more than before
- Other strengths of the identification process include:
  - More detailed discussion about the poverty situation of villagers resulting in more precise assessments
  - Reduced possibilities for higher level officials to use of list for nepotism
  - Raised awareness and interest at village level in dealing with poverty
- VWG are male dominated but active participation is not a question of gender, but of 'professional experience and position
- The process is participatory but limited to those with education and position
- The process was followed much more systematically in some villages than in others. Especially the way the first draft was created varied from totally in-line with the intended procedure to the village chief drafting it on his own.
- However, the resulting draft list was available for public inspection in all villages
- Criteria remain a real issue. VWG 'work their way around' the inherent difficulties, but the comparability is necessarily compromised by these local 'adaptations' (specific definitions of inherently 'vague' criteria and/or taking additional criteria into account).
- The VWG had most difficulties with the housing and income criteria; they were positive about the removal of land holding as a criterion because they felt it was a problematic indicator: not holding but actual production is what matters.
- (Implicit) ceilings on the number of families on the list is problematic for the poorest villages; if villages have more families matching the criteria than the ceiling 'permits', VWG feel caught between the commune and their fellow villagers. CAS was not able to establish who was behind the ceilings.
- The integration with the CIP process forced a lot of time pressure on the MVFL process; for the next update allowing for more time, especially for properly drafting the first MVFL[1], is strongly advised.
- Real ownership assumes more capacity building. The ToT approach has limitations. Those only indirectly trained have much less grasp of the process than those directly instructed by DFCT members and GTZ staff. Sometime understanding was below the minimum level required for productive participation.

[1] I.e. through appropriate information gathering, discussion, and assessment in terms of criteria by a VWG of which a variety of members is actively participating in its proceedings.

- Some procedural requirements seemed under-resourced. Basics like having copies of the lists and the HH scores at the various administrative levels involved (village, commune, district) and storing these for future reference were not fulfilled everywhere. Further awareness-raising regarding the NEED for this (transparency, accountability), and ensuring that the material resources to do it are not a problem is necessary.
- Integration with the CIP process has obvious prospects for ensuring the continuing availability of resources after outside support is withdrawn. However, for this integration to reach a level that is sufficient to make MVFL a standard component of the CIP process, with an accompanying allocation of financial and other resources, at least one or two more years of outside facilitation seem needed. Reaping the fruits requires some more repeats.

Regarding overall poverty status of the villages surveyed

- The survey provides us with an internally consistent picture of poverty differentials between villages. Some villages are poorer than others.
- As table III below shows, these differences are NOT proportionately reflected in the number of HHs on the MVFL. This results in lists tending towards being too inclusive (rich villages) or too exclusive (poor villages).

Table III Poverty differences are not consistently reflected in numbers of HHs on the MVFL

	Summary poverty ranking[2]	Listed HH[3]
Krasang Meanchey	1	111 (36%)
Thmei	2	53 (24%)
Prey Pi	2	46 (21%)
Trapeang Thom	3	43 (16%)
Damnak Kralanh	4	**27 (24%)**
TOTAL		261 (23%)

Regarding the accuracy of how VWGs summed the criteria scores

- The summations have been done with great accuracy in three of the four villages for which we had scoring sheets.
- The one exception was an error that did not alter the results in a significant way.
- This is different from the many errors CAS encountered earlier in an evaluation of the MVFL process in Kampong Thom. For Kampong Thom this was the first try at this approach. The difference confirms that repeating the process pays off.

Regarding false inclusions (HHs on the lists that should not have been on it)

- Overall there are 12% false inclusions across five villages. This percentage refers to the sub-sample of HHs on the list.
- The proportion of false inclusions is a function of the overall poverty status of the investigated villages AND the extent to which the percentage of HHs on the MVFL reflects this overall poverty status.
- The poorest village, with a list that is shorter than it should have been had the least false inclusions (2%).
- Of the two richer villages, one reflected it wealthier status by including a relatively low percentage of HHs in its MVFL. This village had the next lowest number of false inclusions (9%)

[2] Ranking goes from 1 = poorest to 5 = richest
[3] Total nr. of HHs = 1130

- The other, richest village – with a MVFL that has as many HHs on it as much poorer villages - had the highest number of false inclusions (38%)
- Thus, where a village is much richer than average but does not cut down its percentage of HHs on the MVFL, the percentage of false inclusions is bound to be above average. Or phrased otherwise: richer villages run a relatively greater risk of false inclusions.

Regarding false exclusions (HHs not on the list who should have been on it)

- Overall there are 15% false exclusions across five villages. This percentage refers to the sub-sample of non-listed HHs.
- The conclusions regarding false exclusions are the mirror image of those about false inclusions: The proportion of false exclusions is also a function of the overall poverty status of the investigated villages AND the extent to which the percentage of HHs on the MVFL reflects this overall poverty status.
- The poorest village, with a list that is shorter than it should have been had the most false exclusions (50%).
- The richest village – with a MVFL that has as many HHs on it as much poorer villages - had the lowest number of false inclusions (7%)
- Thus, where the village is really very poor implicit ceilings on what is an 'admissible' percentage of HHs on an MVFL results in an above average percentage of false exclusions. Or phrased otherwise: poorer villages run a relatively greater risk of false exclusions.

Regarding overall accuracy of the MVFL process

- As table IV shows: for these five villages[4], 14% of the HHs were incorrectly identified as poor or non-poor. In other words, for the sample of HHs investigated 1 out of 7 was not correctly identified.

Table IV: Overall outcome accuracy

<table>
<tr><th></th><th>Nrs of HHs</th><th>Accurate versus inaccurate</th><th>Nrs of HHs</th><th>% of sample</th></tr>
<tr><td>HHs correctly[5] on an MVFL</td><td>189</td><td rowspan="2">Accurately listed</td><td rowspan="2">396</td><td rowspan="2">78%</td></tr>
<tr><td>HHs correctly not on an MVFL</td><td>207</td></tr>
<tr><td>False inclusions</td><td>29</td><td rowspan="2">Inaccurately listed</td><td rowspan="2">71</td><td rowspan="2">14%</td></tr>
<tr><td>False exclusions</td><td>42</td></tr>
<tr><td>Borderline HHs[6]</td><td>41</td><td>Indeterminate</td><td>41</td><td>8%</td></tr>
<tr><td>TOTAL</td><td>508</td><td></td><td>508</td><td>100%</td></tr>
</table>

[4] As a reminder: we do not claim these figures are statistically representative for the MVFL process in Kampot province.

[5] Correctly refers to a listed or non-listed status, as per VWG assessment, that was confirmed by the CAS survey team's assessment.

[6] HHs on the borderline of listed or non-listed, for which the VWG score and the CAS score only differs 1 point, rather than the required 2 that would define them as false exclusions or inclusions (i.e. 18 listed HHs with a score of 5 and 23 non-listed HHs with a score of 6).

Regarding differentiating between extremely and very poor

- The MVFL procedure is reasonably accurate regarding the *identification* of MVF but is not very accurate in differentiating between extremely and very poor families. The VWG tend to either include or exclude families and when they include them assign 'extreme' scores on most indicators. Table V shows that VWG and CAS assessments largely agree on the question *if* a HH should be on the MVFL. But they very much disagree about the *severity* of poverty of the HHs on the MVFL.

Table V Inaccurate differentiation between extremely and very poor

	Agree about listed status		Disagree	Total
	Extremely poor	Very Poor		
Village Working Group	157 (90%)	17 (10%)		174
CAS survey scores	41 (24%)	108 (62%)	25 (14%)	174

- A probable reason for this is that criteria scores are used to legitimate the listed status of the HHs on the MVFL.

Regarding the poverty identification models that are being compared

The various models differ in so many aspects that it is impossible to really compare them beyond a basic 'output' comparison.

- The models differ in the number of criteria used
- The models differ in the kinds of criteria they use
- The models differ even more at the level of the actual criteria
- The models differ in the weights given to criteria
- The models differ in their scoring ranges at criterion level and their range of scores at aggregate level
- The models differ in the break-off points between levels of poverty
- The models differ in the number of levels of livelihood that they differentiate between

Regarding the output comparison between the models and the Kampot MVFL model

- The proportion of poor amongst the 508 HHs surveyed in Kampot identified by the various models varies greatly. At one extreme, the Kirivong model only identifies 6% of the 508 HHs as poor. On the other extreme, the CFSD Monkul Borey model identifies 94% of these HHs as poor.
- The overlap between the various models and the Kampot MVFL model in terms of individual HHs identified as poor or non-poor also varies greatly. While only 11% of the HHs identified as poor by the Kampot MVFL model were identified as such by the Kirivong model, 100% of them were identified as poor by the UNICEF Svay Rieng model.
- There is an obvious but biased relationship between the proportion of poor identified by a model and the extent of overlap at HH level with the Kampot MVFL model. When a model identifies much more than 50% of the sample as poor, this cannot but result in a high percentage of overlap with the Kampot MVFL model. In technical language: proportion of poor and overlap at HH level are correlated.
- An indicator for the similarity of poverty identification models[7] to the Kampot MVFL model shows that none of the other models is really

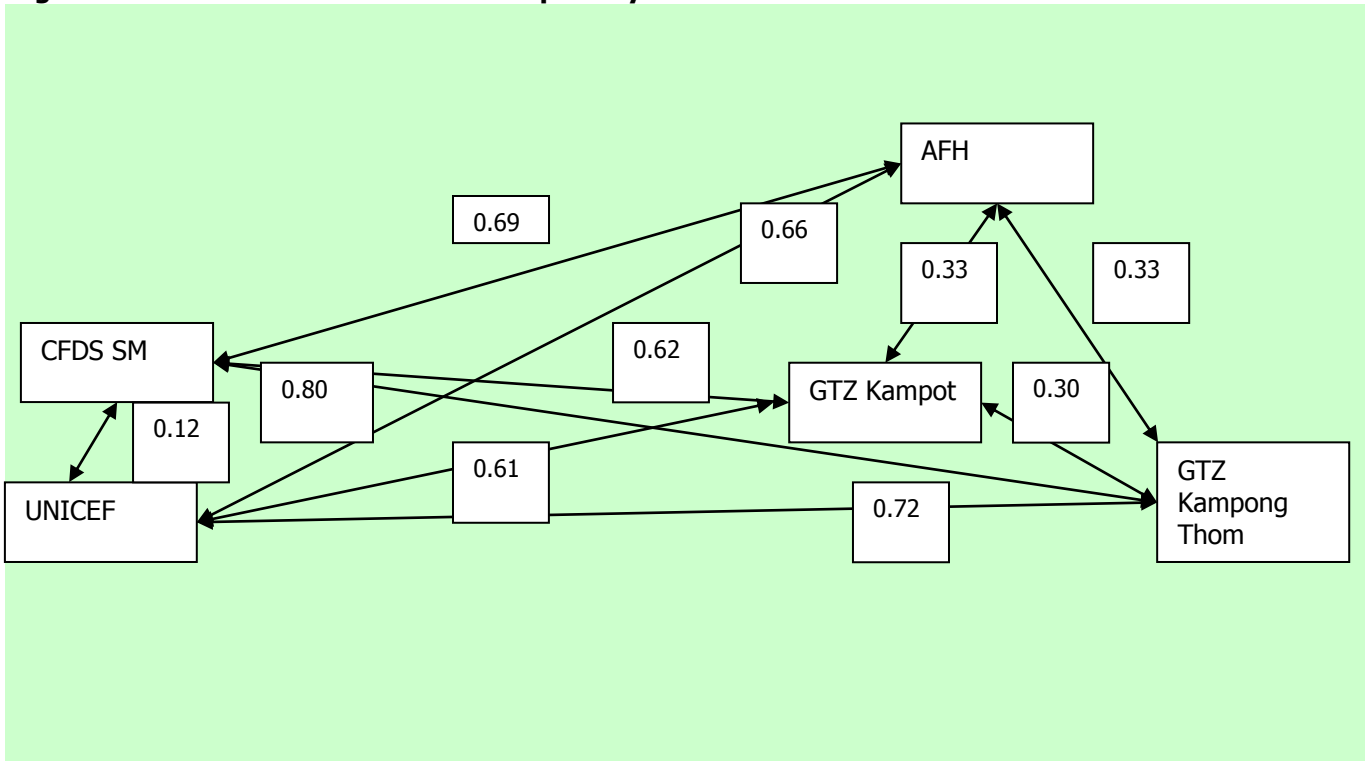
[7] This very simple indicator works well for models that have an overlap at HH level of 50% or more. As models who overlap less are of no interest this indicator does the job.

very similar to the Kampot MVFL model. The indicator compensates for this bias and has a range of 0 to 1 with 1 indicating total value. Models scoring 0.8 and above can be said to be really similar to the comparison model. The model that is most similar to the Kampot MVFL model is the Kampong Thom MVFL model and has an indicator score of 0.7

Regarding comparison across all models

- If we exclude those models from the comparison that identify nearly none or nearly all HHs as poor, i.e. if we exclude the CFDS Monkul Borey and Kirivong models, 27% of all HHs surveyed in Kampot are identified as being poor HH by ALL models.
- In terms of overall similarity, there are two clusters of models:
    - GTZ Kampot, GTZ Kampong Thom & AFH
    - UNICEF Svay Rieng & CFDS Sompou Meas
- The two models of the second cluster are more like each other than the three models of the first cluster. The figure below visualizes the 5 models in terms of their similarity. Similarity is here expressed in its opposite – distance – but the underlying indicator is exactly the same.

Figure A The distance between the five poverty identification models



Distance between two models = (1-averaged similarity indicators) for the two models

Regarding the relationship between poverty identification model design and output

- So many different components go into the poverty identification models which we have compared that it becomes impossible to determine what makes for their output.
- However, what makes the models fundamentally incomparable is that they differ in the definitions of their criteria. What it means to be poorly housed, or to be poor in terms of particular assets (animals, means of transportation, media equipment, etc.), or to have a disadvantaged HH composition, etc. etc. is different across models.

Recommendations

In line with the objectives the study gives some recommendations regarding the GTZ Kampot MVFL process and outcome and for harmonized/standardized poverty identification schemes in general.

The process of updating the Most Vulnerable Families Lists

1. The experience of this update shows that one needs to allow for sufficient time to ensure proper implementation of the MVFL process, especially for drafting the first MVFL[8].
2. However, reaping the fruits requires some more repeats. For the integration with the CIP process to reach a level that is sufficient to make MVFL a standard component of the CIP process, at least one or two more years of outside facilitation appear to be necessary. The repeats should pay explicit attention to the following aspects:
    a. Real ownership needs more capacity building.
    b. Procedural requirements seem to have been under-resourced. Further awareness-raising regarding the NEED for this (transparency, accountability) is necessary.
3. The dominance of the 'professionals', better educated, villages with some kind of position is what is to be expected. It is also very probable that broadening 'real' community participation is going to be difficult. Given involvement in another couple of repeats, GTZ may nevertheless consider exploring some alternative modalities of facilitating the constitution of VWGs to see if participation, including that of women, can be increased.
4. There is a real argument for keeping criteria vague: for both validity reasons (local understanding and assessment is in principle seen as more accurate than assessment on the basis of abstract general criteria) and for reasons of ownership of the identification process and outcome, the GTZ Kampot criteria allow for considerable interpretative freedom. However, we suggest to aim for more concretely defined criteria to ensure better comparability and lessen the interpretative burden on VWGs (given proper training).

The outcome of the MVFL process in Kampot

6. The inaccuracy regarding the differentiation between sub-categories of poor shows what interpretative freedom results in. We believe that to the extent that criteria are more concretely defined AND VWG members are better trained, using criteria to differentiate is feasible.

[8] I.e. through appropriate information gathering, discussion, and assessment in terms of criteria by a VWG of which a variety of members is actively participating in its proceedings.

Comparing poverty identification models

7. What makes the models fundamentally incomparable is that they differ in the definitions of their criteria. In fact, for most if not all models, the word "model" suggests too much specificity. Similar to the Kampot MVFL model, the lists of criteria are normally conceptualized as a "guideline", a "check", a "decision-making aid" or something procedurally similar. They are meant to somewhat objectify local understandings but certainly not replace them. We suggest that:

   a. Comparability is impossible without agreement on a particular number of precisely defined criteria. Harmonization cannot be achieved without agreeing upon a common set of such criteria. Equally, comparability assumes agreement on a break-off point for the aggregate score based on these criteria.

   b. The selection of a basic list of specific criteria, associated weights, and break-off points in the aggregate score to differentiate between poverty levels should at least be based on statistical analysis of recent national level datasets like the Cambodia Socio-Economic Household Survey. However, we would strongly advocate a process approach to the choices made: the first list of specific criteria, associated weights, and break-off points should be considered a starting point, to be adapted in a continuous learning process. This would imply that the working group on harmonization does not consider the job done when a first agreement is reached but continuous as a platform for learning and exchange.

   c. The arguments for honoring local understanding and aiming for local ownership are equally valid. A way to both realize harmonization AND ensure room for local understanding and facilitate ownership is to allow for additions to the basic set of criteria. As long as implementers of poverty identification schemes can be persuaded to document the identification process in such a way that the HH scores for each criterion are kept on record, this record can be used to *both* calculate a nationally comparable poverty profile *and* a local poverty profile. In fact, to the extent that the added criteria are well-defined, such procedure would result in interesting area-specific datasets that can be evaluated by the harmonization working group (see 7b).

1. Introduction

"Recent studies have shown that specifically targeting the poverty status of households can significantly improve efficiency and cost-effectiveness of social transfers and development assistance. The GTZ and FAO assisted Community Based Rural Development Project, in collaboration with partners in Kampot and Kampong Thom provinces, have developed identification mechanisms of the poor at household level and have piloted this instrument within already existing projects"[9].

In 2003 GTZ facilitated a first round of community based poverty identification in Kampot. This resulted in Village and Commune lists of Most Vulnerable families (MVF). In 2004 a first update took place. In July/September 2005 a second update, fully integrated into the commune planning process, and using a new set of criteria was facilitated. Integration into the Commune Investment Planning process was a first ever try to make poverty identification part and parcel of this llocal government owned procedure. The process of establishing MVFL is implemented at the village and commune levels by groups of villagers and local authorities under the guidance of Community Development Facilitators and GTZ staff.

In order to verify the accuracy, fairness and reliability of the process and its resulting lists GTZ commissioned an independent evaluation.

In consultation with CAS it was decided to use the opportunity of this evaluation to also create input for the wider goal of "…the development of a standardized approach that effectively targets the poor and can be implemented across the country"[10]

The background for this latter objective is that in Cambodia, as in other countries with high levels of poverty, the discussion on effective strategies for how best to target the poor is ongoing. Various approaches or tools for identification and targeting have different advantages and disadvantages[11]. In Cambodia, many targeting schemes are community based. Early 2005[12] the Council for Social Development with assistance of GTZ organized a first national forum on identification of poor households to share experiences, identify common aspects of existing approaches, and identify the potential for and develop next steps towards harmonization of identification procedures.

This forum resulted in various recommendations regarding principles for community based identification approaches. However, a number of issues were identified that needed further discussion before harmonization guidelines can be formulated. One major issue is the *basic set of criteria* that harmonization requires[13]. In addition to assessing the particular poverty identification scheme implemented by GTZ in Kampot, this study provides empirical input to facilitate these wider discussions on the harmonization of criteria.

[9] GTZ (December 2004), p.1
[10] Ibid.
[11] E.g. Conway (2005)
[12] See Buehler (2005)
[13] The principles involved are: The need for a *fair and transparent process* requires the use of *objective tools for identification*, which in turn implies the need for an *agreed basic set of criteria*.

1.1 Objectives of the evaluation

The major **objectives** of this evaluation are to ascertain whether the:

1. Updating **process** has been executed as intended?
2. **Outcome** of the process is accurate?
    - An independent thorough check on the number of false inclusions on the updated MVFL list in a selected number of villages (how many of the families on the list should not be on that list)
    - An independent thorough check on the number of false exclusions on the updated MVFL list in a selected number of villages (how many of the families not on the list should actually be on that list)
3. There exists a possible **relationship between process and outcome**, the extent to which the intended updating procedure is followed and the quality (i.e. number of false inclusions and exclusions and the differentiation between extremely and very poor HHs) of the resulting lists.

And to provide:

4. **Empirical input for discussions on harmonization of poverty identification criteria** by testing the use of a more elaborate set of criteria on individual HHs; and providing GTZ with a dataset of raw information potentially relevant for assessing Socio-Economic Status (SES) from various sectoral perspectives (health, education, agriculture, land, water supply,…)

1.2 Process evaluation

The check on the process consisted of three elements:

- Observation: In five villages different steps in the updating process were observed by CAS researchers. Annex 2 contains a description of the various steps in the identification process as it was used during the 2005 update. The major objective is to provide GTZ with some outsider impressions regarding the village level proceedings.
- Additional information gathered during quantitative phase: The same five villages were used for the quantitative check on the false inclusions and negatives (see below 1.3). This provided opportunities to follow up on some of the observations with key village representatives in case the CAS team was unclear about particular aspects of the proceedings they had observed earlier.
- Questionnaire results: The quantitative instrument contained questions on people's participation in the Village Planning Meeting during which the MVFL was discussed. In addition to that the instrument contained questions about people's opinions regarding (numbers of) false inclusions and negatives. These can be regarded as proxies for people's satisfaction with the process/opinion on the fairness of the process

1.3 Outcome evaluation and relating process to outcome

This element of the evaluation checked the accuracy of the household (HH) level poverty assessments of the Village working Groups (VWG) in the five villages that were selected for process observation. The rationale for this design choice was the following: The limited budget available for this evaluation did not allow for a random sample large enough to allow for statistically significant conclusions regarding the accuracy of the outcomes of the MVFL process across the whole province. However, the budget did allow for collecting comprehensive HH information on some villages. This will not allow for an overall accuracy assessment but it does

allow for more in-depth exploration of sources of inaccuracy that are related to the particular list of criteria used. Also, by taking the same villages for which we have process information, provides some basis to relate quality of process to quality of outcome. And last but not least, the choice for comprehensive data collection in a couple of locations allows for the additional objectives of further exploring the more general issue of different types of criteria for poverty identification (see below 1.4)

Beyond investigating false inclusions and negatives, the check also looks at scoring differences (between VWG and CAS) per se. For this update, the criteria were used to differentiate between two levels of poverty: extremely poor and very poor. Was the VWG scoring up to this task?

1.4 Creating an empirical evidence base for discussions on harmonization of poverty identification criteria

In order to enable analysis beyond the check on the implementation of the GTZ criteria by Village Working Groups and create something of potential relevance to the national process of harmonizing mechanisms and approaches to poverty identification we were given the opportunity to use an instrument that includes a more elaborate set of criteria/key data on individual HHs than the GTZ list.

Annex 7 provides additional background to this objective. Nearly all of Cambodian poverty identification efforts, the MVFL approach included, use 'naïve' or 'arbitrary' methodology, i.e. methodology that has no proper evidence-base legitimating the choice of criteria and their relative weight. The statistical analysis required to approach this choice and weighing issue in general terms are best applied to nationally representative datasets and is beyond the possibilities of this study.

The illustrative contribution that can be made on the basis of this small dataset of Kampot HHs is of a different nature. Work elsewhere (see annex) strongly suggests that the choice of poverty identification methodology does matter. That is not going to surprise any researchers or practitioners in Cambodia familiar with the issue, but it is nevertheless ground for worry. Mostly, poverty identification in Cambodia is not an academic affair, only feeding policy decisions at a macro level. It is directly tied to service delivery subsidies, like Health Equity Funds (HEF) and scholarships, to *individual HHs*. One would very much want to include all eligible HHs and exclude those that do not need the subsidy.

The instrument was designed so as to allow for the comparison *at HH level* of what different poverty identification methods, all of them some version of an 'arbitrarily' aggregated score of consumption and/or assets and/or demographic variables. Annex 8 gives the overview of all the methods compared and the particular mix of criteria and the relative weight assigned to them by each method.

What we hope to find out is:

- How much overlap is there between the different methods compared in terms of families identified as poor? Not in overall numbers but in terms of actually identifying the *same families*.
- Does this comparison tell us anything about the usefulness of particular (sets of) criteria?

The dataset itself is also a major deliverable. As it allows for the comparison of at least six different poverty identification "models", it can be used as a laboratory to test all kinds of assumptions about the implications of changes in criteria, weights, etc. that may come up during the harmonization discussion.

2. Survey methodology

Location
The survey covered five villages in 5 communes in 5 districts in Kampot in a purposive sampling scheme. The villages were selected by GTZ/Kampot. The major selection criterion was the stage of the MVFL process the village was in. GTZ wanted process observation and many villages were already too far into the process (see annex 2) for this to make sense.

Table 1: Locations

District	Commune	Village	HHs interviewed
Kampot	Trapeang Sangkae	Trapeang Thom	102
Dong Tung	Sraechea Cheung	Prey Pi	105
Chhuk	Daun Yoy	Krasang Meanchey	101
Chumkiri	Chumpuvorn	Thmei	100
Kampong Trach	Kanthor Keut	Damnak Kralanh Lech	100
Total			508

Respondents
The survey covered 508 respondents and their households, representing a total of 2389 individuals.

Timetable
The fieldwork took place over 3 weeks from 28 August 2005 until 19 September 2005.

2.1 Sampling
The basic choice was to either go for statistical representativeness of the sample, or investigate a couple of villages in depth. The required sample size for representativeness was beyond the possibilities of this study. However, the alternative is not necessarily second best. By going for large samples in just a couple of villages the dataset allows us to say something about village level differences. This perspective is not often available while from a practitioner point of view the question of how one village differs from another is obviously very relevant.

Thus the dataset **does not provide us with a representative picture** but only allows for 'indications' about the quality of process and outcome of the MVFL exercise in the whole of Kampot, but it does give us something that a representative sample does not offer: the opportunity to relate village-level differences to outcomes.

The sample was constructed based on the assumption that we sample five average size villages, one in each district, and sample the 50% poorest families. The expected size of an average size village was 200 HHs.

- Average village size = 200 HHs; expected average number of HHs on MVFL = 25% = 50 HH
- We want a thorough check of false inclusions, a good indication of false exclusions.
- With 50 HHs on the MVFL we might as well go for a complete check for the false inclusions: 50HH

- If we go for equal sample size this implies interviewing a sample of 50HH of the remaining 150 HHs.

A sample of 100 HHs was expected to include all current MVFL HHs and those that are going to be on any updated list whatever the decisions taken regarding break-off points, because GTZ expected that the average number of HHs on the updated MVFL would not exceed 25%. Thus, for these five villages we would then have information that allows for analysis about how those on the list compare with those not on the list and deliver a database that enables GTZ to see how various possible decisions regarding criteria & break-off points work out in comparison with the actual MVFL. This provides both for the required check (false inclusions/negatives) and input for the ongoing discussions regarding the use of the MVFL for service delivery waivers.

In practice one of the villages selected by GTZ/Kampot contained more than 300 HHs and its MVFL had more than 100 HHs on it.

The purposive sample was arrived at in the following way:

- The village chief and/or other local authorities were asked for the most current updated MVFL. Help was asked to locate the listed families within the village. All listed HHs available during the days the team was in the village were interviewed.
- Procedurally, the Village Working Group (VWG) or the Commune should have a documented set of scores on vulnerability criteria (see annex) for all HHs on its list. However, in practice, scores were only available for the HHs included in first draft of the MVFL. If HHs were added later on (Trapeang Thom, Prey Pi, Damnak Kralanh), no scores for the added HHs are available. The scores of one of the five villages (Thmei) were not available at all. The list had become illegible by bleaching (sunlight) and no copy was available.
- The remaining ' space' i.e. to arrive at a total of approx. 100 HHs/village was used to interview a second batch of HHs that had been identified by the same informant(s) as being (nearly) as poor as those on the list.
- In case these HHs were not available, the team replaced them with other HHs based upon their own assessment of poverty
- If respondents identified either false inclusions or false exclusions (Questions Q and R of the survey) these HHs were also contacted and interviewed.

Table 2A below shows the resulting sample. Table 2B (see annex 12) provides more detail. The **Listed HHs** refers to the HHs on the MVFL. For the HHs on the MVFL, only partial information was available about their VWG scores. For three villages scores were available for nearly all listed HHs, for one village only scoring info for half of the listed HHs was available, and for one village all scores had been lost. The row for **HHs scored** shows the number of listed HHs for which we had scores. Of the HHs on the MVFL we could interview most: see **Listed HHs interviewed** (some had moved away permanently or temporarily, or were not found at home despite several call-backs). The last row gives the numbers for the **Listed HHs with a score** that the CAS team was able to **interview**.

Table 2A: Sample

	Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh
Total HHs	267	221	311	218	113
Listed HHs	43 (16%)	46 (21%)	111 (36%)	53 (24%)	27 (24%)
HHs scored	40	43	110	0	14
Listed HHs interviewed	35	42	89	46	24
Non-listed HHs interviewed	67	63	12	54	76
Interviewed HHs as % of Total HHs	38%	48%	32%	46%	88%
Listed HHs with score interviewed	34	39	88	NA	13

2.2 Questionnaire design

The survey instrument was designed by CAS to enable both a check on the quality of the poverty assessment by the Village Working Groups as well as allow for comparing the assessments arrived at by applying the GTZ/Kampot criteria with assessments based on a set of alternative poverty pre-identification methods (mainly equity funds schemes implemented by different providers).

The instrument also contained two questions on process and two questions for identifying possible false inclusions and false exclusions. The latter two were only asked to 15 respondents in each village.

The resulting instrument had to remain within the pragmatic limits of the time available and not all criteria necessary to compare the GTZ/Kampot pre-identification ' model' with all possible alternatives could be included. However, the instrument is considerably richer that the original list of criteria and allows for correlating all kinds of alternative poverty indicators with the selection used by GTZ.

2.3 Training of data collectors

A one day interviewer training was organized for the team of enumerators. Objectives of the training were:

- Familiarize the team members with the format of the questionnaire, including the interrelationships between various questions;
- Ensure good understanding of the exact meaning of all questions and answer codes, including probing options and understanding of the relevance of each question in light of the general objectives of the survey;
- Ensure good understanding of how to record the information and opinions received.
- A reminder (team members were experienced data collectors from CAS regular pool of enumerators) of proper behavior in the field.

2.4 Data-collection and data-entry

Survey team and supervision

The team consisted of 6 members: 5 enumerators and one supervisor. In addition to the regular supervision, the research coordinator conducted spot checks and was in near daily telephone contact with the team.

Quality control

Supervision is a crucial but not the only aspect of quality control. The other elements are:

- The questionnaire contained detailed interviewer instructions, spelling out what to do;
- Where relevant, the interviewer training included concrete examples for non-suggestive probing and where possible, these were included in the above-mentioned instructions (see above);
- Field editing: each enumerator was required to check completeness of the questionnaire before leaving the household. A second check was performed by the supervisor, and, if necessary, the enumerator was send back to clarify or complete information.

Interview time

The estimated interview time per questionnaire was 30 minutes. In practice, the average interview time turned out to be between 40 to 60 minutes.

Data entry and cleaning

Writing the data entry template and data entry itself was done in-house. The data entry and data analysis program used is SPSS. Data entry followed normal double entry procedures. Extensive logical checks and cross-tabulation checks were executed to ensure a clean data set. The strict quality control procedures applied (see above) enabled the inclusion of all questionnaires collected into the dataset. This means that the number of interviews conducted with councilors and citizens equals the sample numbers of the resulting data sets.

3. Results of poverty identification update process assessment

The observation was designed to take place in two phases: a first phase observing the updating of the MVFL by Village Working Groups, and a second phase for observing the verification of the updated lists by the Commune card establishment teams. However, during the time available for the assessment these teams were not yet operational because decisions about who was to provide the necessary resources for this were not yet taken.

During the first observation phase (28/6/2005 – 1/7/2005) the team of CAS visited 8 villages in 5 districts of Kampot province.

Village updating	District	Number of VWG members	MVFL
Krasang Meanchey	(Chhuk district)	15	was ongoing
Khley	(Chum Kiri district)	13	was completed
Thmei	(Chum Kiri district)	12	was completed
Trapeang Thom	(Kampot district)	11	was ongoing
Domrei Botkbal	(Kampot district)	7	was completed
Prey Pi	(Dang Tung district)	15	was ongoing
Sophy	(Dang Tung district)	10	was completed
Damnak Kralanh	(Kompong Trach district)	10	unclear

Thus some villages had already completed the listing process. Updating of the MVFL in the villages was under time pressure because the process was intended to align with the Commune Investment Planning process (CIP).

The CAS team was able to participate in four ongoing meetings for MVF identification. Only, one of the meetings attended was an official community planning and community development meeting organized by the district community development team (DCDT). The others seemed specifically organized for the MVFL updating. The one meeting that was actually integrated with a village level CIP meeting proved not a good vehicle for the MVFL process because the agenda left no room for it. The CAS team – after the meeting - separately met with five Village Working Group members to ask them about the updating process of their village. In the other four villages the team interviewed members of the VWG after the fact about the process of updating.

During the survey check on the VWG scores (29.08.-18.09.05) the CAS team interviewed Village Working Group chiefs of the 5 villages to describe the MVFL updating process from their perspective.

Krasang Meanchey village	07.09.05
Thmei village	10.09.05
Trapeang Thom village	29.08.05
Prei Pi village	02.09.05
Damnak Kralanh Khang Lech	16.09.05

The third element of the process assessment consisted of a limited number of questions to sub-samples of survey respondents about process related issues.

The results of these three elements are presented below in sections 3.1 – 3.3.

3.1 Observation results

This section summarizes across all villages. Section 3.2 describes the specificities for the five villages where the survey was implemented.

Process of updating the MVFL

In most villages village representatives came together in order to update the MVFL of 2004 and to discuss names of families who should be added to the list. The working groups consisted of commune council members, village representatives (mostly Village Development Committee – VDC - members or group chiefs) and village chiefs. The meetings took often place in the presence of GTZ staff who provided explanations or comments in case of difficulties. In one village no working group meeting took place because of time constraints and the village chief drafted the list by himself before attending the commune meeting.

The Village Working Groups consisted of 11-15 members but in most cases not all members joined the meeting for updating the MVFL. Absent members were said to be busy with other business but often it was not clear why members did not come (even members who had received training). In two villages it seemed that the members were not informed in time making it difficult for them to arrange for participation.

In all meetings either the village chief or the VWG chief led the meeting and filled the list, sometimes with considerably assistance (explanations/interventions) by commune council members and/or GTZ staff. In most discussions witnessed some of the village representatives remained quiet and indifferent. Upon probing they often shyly conceded that they did not understand the procedure and some even did not know what the purpose of the meeting was to which the village chief had called them just that same morning.

Most active in the discussions were committee members of VDCs, pagoda committees and/or people with work experience in NGO projects (like CIDSE – rice bank, cow bank, library etc.).

Women were strongly underrepresented in the committees, but regarding actual participation, men and women acted alike: 'position' was what determined if they remained quiet or actively participated.

On the basis of the 2004 list the economic situation of each family was assessed in light of the new criteria and a decision taken if the family remained on the list and/or if there were new families to add.

Members of the VWG confirmed that this time round they were more able to undertake such an assessment because the criteria are more concrete than last year and because of increased awareness in the village about the listing process. However, some difficulties remained, especially with respect to the distinction between poor and very poor families. Some criteria appeared not to be clear enough for such assessment.

All groups witnessed repeatedly disagreed about the rating of the housing situation of families. People often disagreed on the assessment of the state and size of the house and in classifying it as type 1 or type 2. They seemed not very aware of the considerable difference in the total score caused by different assessment of the housing situation and in some cases seemed to lack understanding of the system of *double* rating of the housing situation (see annex 4 for a detailed explanation of the scoring system; housing is responsible for 25% of the total score).

In one case a discussion arose about the case of a family with a big (but dilapidated) house but not enough food, labor force and other means to secure their livelihood. In this case the consequence of the housing score was recognized: although the family would otherwise have been classified as poor they would fall out the list because of lacking the double weighted housing situation score. Another family with a small house but in a much better situation regarding other criteria would enter the list because of the high score given for the house situation. The unfairness of these results was seen as problematic. Another issue of debate was how to deal with a family who did not have their own house but lived in a spacious solid house of their parents.

In general, our impression was that the groups tried to set additional (of course different in different villages) sub-criteria in order to have workable parameters for comparison for the own village.

Similar difficulties existed in assessing the income situation and food security. Available information was often vague and sometimes contradicting. The members of the VWG were often unsure how to deal with diverging information about the extent of food security. Aggravating this situation was that this year's drought meant that all villagers were more or less affected by food shortages. So, to eat rice porridge (*bâbâr*) frequently is not automatically an indicator of extreme poverty[14], particularly because even the destitute often prefer to have a full rice meal in renunciation of anything else[15].

Most active members of the VWG expressed unease assessing income of other families. They stated that they are not much aware of the extent and regularity of income because people do not like to talk about it. It can also not be expected that people will tell the truth about their income. So they felt forced to make estimates without having sufficient information. Even if people have livestock it is difficult to say if they can earn from it or suffer losses through veterinary or unexpected breeding costs. Income assessment based on physical labor force is also difficult because they felt that lack of knowledge and professional skills of the poor may lead to much less income than assumed by others.

VWG mostly confirmed that land is not a good criterion for poverty assessment. Almost all villagers have land but differ greatly in their ability to secure a livelihood from it because of various reasons. So people felt it was a good decision to take this criterion out.

Interestingly, in some cases where the process of identification had been completed before the CAS team arrived in the village in the discussion with VWG members some distinguished between so-called "good" and "bad" poor and seemed convinced that some families have caused their poverty through their own laziness or thoughtlessness[16]. They reported that the issue of discussion during the updating meeting had been if such families should be included in the list because of the risk that support provided would be squandered on gambling, alcohol or thoughtless spending for pure consumption purposes.

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[14] A characteristic of *extreme* poverty is its permanence, so temporary food shortages always indicate poverty because the HH does not have sufficient buffer, but not necessarily *extreme* poverty.

[15] The argument given by several key informants was that even the very poor rather *eat less often*, but when they eat, eat rice, than eat *rice porridge frequently*.

[16] The 2001 ADB Participatory Poverty Assessment (see also annex 7) shows that this is very common in Cambodian poverty discussions.

With one exception all villages visited by the CAS team during the identification process had active village level participation, if limited to the village 'elite' (in terms of knowledge and skills). In all villages where the process was completed the list was put up for public inspection and no complaints of villagers were reported so far.

Perception of the usefulness of the identification process:

- VWG members who were interviewed after the completion of the identification process mentioned that not many organizations have used the list as yet;
- In some cases the Cambodian Red Cross refused to use the list and preferred selecting poor families anew
- The general perception in the villages is that so far the lists have not yet brought real benefits improving the situation of the poor(est) families, not in economic terms nor regarding social aspect (health service, education etc.)
- Nevertheless, hope is evident that it will bring some benefit to the village sometime in the future
- Especially in villages where NGOs have been active for a longer time the lists are used to encourage villagers to strengthen mutual help and to develop more understanding for extreme poor families (e.g. CIDSE in Khlai and Thmei villages)

Strengths of the identification process:

- Improved participation by village representatives
- More detailed discussion about the poverty situation of villagers resulting in more precise assessments
- Reduced possibilities for higher level officials to use of list for nepotism
- Raised awareness and interest at village level in dealing with poverty
- Repeating the process and increased participation by village representatives have reduced the unrest in the villages about the listing process and strengthened the ability of village/commune authorities to handle the process as a whole

Limitations of the identification process:

- Very short time frame leading to hasty organization and implementation putting stress on responsible persons (possibly higher error rate)
- Unease of higher levels about more/'too many' poor families on the list compared to previous years; limitations of the number may result in a list that does not reflect the real poverty situation of a village
- Insufficient documentation and archiving of the lists, no clarity about where and who is responsible, lack of means for documentation at village level (paper, copying)
- Still very much/completely dependent upon external support for organizing and implementing

3.2 Additional information gathered during quantitative phase

During the survey field work, the supervisor met with GTZ staff, village chiefs and Village Working Group chiefs and members. Primarily this was to arrange the logistics of the field work and request assistance in sampling. However, these meetings were also used to collect some additional information on the identification procedure followed in the various villages.

3.2.1 General process info by GTZ/Kampot staff

At the start of the field work period the team met with the GTZ program officer in charge of the MVFL procedure. The procedure as documented (see annex 2) was discussed. In addition to the written information, the following issues were mentioned.

- When the MVFL process was conducted for the first time in 2003 the 4 main criteria to identify the most vulnerable people were used: housing situation, husbandry (pigs, chickens...), cattle and income situation.
- In 2003 and 2004 the size of productive land was a criterion but because sizes differ across areas, and size in itself is felt to not very reliably indicate actual productiveness, for 2005 this was replaced by actual production: yearly yields of rice and other crops.
- The definitions of *extremely poor* and *very poor* were not clearly defined before trainings for village representatives on how to identify MVF were conducted
- Trainings were conducted following a *ToT model*:
  - The Provincial Community Development Team (PCDT) – assisted by GTZ – provided a one-day training on identification on MVF for District Community Development Teams (DCDT) and District Facilitation Teams (DFT). *First step.*
  - The DCDT or DFT provided training on the identification on MVF to the commune and the village level. *Second step.*
- PCDT *selectively* monitors the training for communal councilors and village working groups. After the training, DCDT *selectively* observed the drafting of MVFL at village level (many VWG drafted the MVFL on the same day so that DCDT participated in villages where they felt that the VWG were not well organized), and *selectively* participated in village meetings called to inform villagers of the process.
- No separate village meetings just for the MVFL were called but the issue was integrated into other meetings relating to planning and rural development programs.
- At least 4 to 6 village representatives in each village (proportionate to the number of families) were chosen to attend the one day training on the MVFL procedure. These were normally chosen from Planning and Budget Committees (PBC), Communal Councils (CC), Commune Development Committees (CDC) and Village Development Committees (VDC).
  - After this training, the village representatives selected other members such as elders, monks, village and group chiefs, to draft of MFVL. *Third step.*
- The village working group members are selected so as to include people from all parts of the village because people know most about the living situation and other activities of those living in their own neighborhood.
- Generally a village chief was the team's chief.
- The identification procedure took the 2004 MVFL as its start. Names could be added. All HHs named were to be scored on the 7 criteria (see annex 4).
- A first draft was displayed and then presented in a first village meeting. Villagers themselves could now request the addition or removal of HH. Again decisions were to be based on checks against the 7 criteria.

3.2.2 Process info Krasang Meanchey village (311 HH)

- Village representatives trained: Village association development chief, deputy village association development chief, village chief, commune councilor.
- Drafting of first list: 28-29 June 2005, by 15 VWG members, including 3 women (a first and second deputy of the commune council, commune counselors, the village chief and group chiefs)
- After the training, the VWG spent 4 days to go to villagers' houses before actual drafting. However, the group did not go to the 15 MVFs

because they were identified in the 2004 list and their living conditions are still the same.
- After the MVFL drafting was completed (115 families) the list was stuck to an information board at the village working chief's house for a week.
- 300 families participated in the village meeting. No outsiders, only VWG and councilors joined the village meeting. During the village meeting, VWG representatives explained how to the poor families in the list had been identified through the use of the criteria.
- The VWG chief did not read names of villagers on the MVFL during the meeting but told villagers to see the list stuck on the information board at his house.
- Until the time of this interview, villagers had not made any complaints.

3.2.3 Process info Thmei village (218 HH)

- The village working group consisted of 12 people, including 3 women (village chief, village development committee, village association and pig bank committee).
- Among them, 6 representatives participated in a one-day training by the DCDT.
- The MVFL drafting was done on 16 June 2005. The VWG initially identified 68 HHs out of which 37 were selected in Cat1 and 16 Cat 2 (53 total) by using the criteria. One family on the 2004 MVFL is out of the 2005 list because of resettlement.
- In 2004 15 families had been identified. The identification was not done by a team and no criteria check had been performed. Procedural information received from provincial and district level had been unclear. Selection had been done through villagers raising their hands during a meeting but the process was experienced as partisan and local authorities were blamed.
- Regarding the selection in 2005, the VWG reported difficulties in identifying 2 families (Cat 2 or out of the list). The VWG was not sure about some criteria such as housing situation, food situation and cattle. E.g. one family has 2 cows, but they borrowed money from ACLEDA to buy the cows. In this case the VWG decided to give the family zero score in the criteria.
- The VWG explained the increased number of poor villagers in 2005 were caused by health problems and drought.
- in 2004, neither villagers, village chief nor commune chief were very interested in the MVFL list but after an organization needed a MVFL to provide services to poor villagers they understood its purpose and became interested.
- On 19 June 2005, the MVFL had been put on the information board at the village library and announced by a loud speaker in the village. Until the time of the interview no one had complained about the list.
- After 7 days CIDSE held a one-day village meeting. The VWG chief read the names in the MVFL one by one. PCDT, DCDT, CIDSE, communal councilors and 203 villagers, including 153 female villagers, attended the meeting. The criteria used were explained. No villagers complained.

3.2.4 Process info Trapeang Thum village (218 HH)

- Only Village chief attended 2-day training on community development planning and on process of the MVFL identification procedure. GTZ staff trained representatives from 168 villages in 16 communes in Kampot district.
- The VWG consisted of 6 members, village chief, group chiefs, and village assistant and the elderly.
- The village working group used the 2004 MVFL. The 2004 MVF list consisted of 5 most vulnerable families. The commune leader,

councilors and commune clerk participated in the identification process. An additional 22 poor families were identified for the 2005 MVFL.
- The village-working group decided to identify villagers with chronic illness into Cat 1 in the MVF list.
- The MVF list was displayed on an information board close to the village primary school for 15 days. No complaints were brought forward.
- A one-day village meeting was held by DCDT with the participation of the VWG, commune leader, deputy commune leaders, councilors and 78 villagers. At the village meeting villagers were satisfied with the MVF list.
- However, more than 30 families met with the village chief at his house. They wanted him to include them in the MVFL. The VWG chief reported that he is waiting for PCDT to decide if another village meeting will be held or not. He reported that those villagers own cows, motorbikes and rice fields so he felt their claims were not legitimate.

3.2.5 Process info Prey Pi village (221HH)

- VWG members who attended a one-day training by DCD official: chief of death association, village chief, deputy village chief and clergyman.
- After the training, the VWG chief formed a team of 15 people, including 6 women, selected from all corners of the village (a village chief, deputy village chief, villagers, village primary school master, chief of village association, group chiefs, village health agent, Wat committee and village veterinarian).
- The VWG used the 2004 MVFL with 20 poor families as a starter. Only 15 of those poor families remained on the 2005 list (1 family died and 4 families moved).
- A DCDT official participated in the actual list drafting process Each of the team members raised names of poor villagers known to them. In total, 36 families (Cat 1) and 10 families (Cat 2) were identified for the 2005 MVFL.
- The MVFL was displayed on an information board at the commune office. However, no complaint had been received.
- Then all HHs were invited to a meeting on community development planning. More than 90 families participated. The VWG chief introduced the VWG members, explained the identification process, and announced the listed HH names. Until the time of the interview no complaints had been received.

3.2.6 Process info Damnak Kralanh Khang Lech village (113 HH)

- Nearly the whole 7–member VWG (village chief, village deputy chief, village assistant, rural road maintenance community member, a villager and a health center medical staff) participated in a 2-day commune level training by the DCDT on community development planning and MVFL identification. The Commune council leader also attended the training.
- Within 2 days after the training, the VWG met and discussed possible MVFL candidates, based on the 2004 list. However, the VWG did not put scores down but just noted the HH names in order to be presented before a village meeting.
- On the 1st of July 2005, 82 villagers participated in the village meeting. The village chief read the names of 14 most vulnerable families in Cat1 and 5 poor families in Cat 2 to the meeting attendants. Some villagers wanted their names to be included in the list so the VWG decided to go to ask villagers about their living conditions in their houses after the village meeting.

- One day after the village meeting, his team gathered at the village chief's house to discuss the names of the most vulnerable families. He formed a group of 10 members from all wards of the village. The team members went directly to villagers' houses and checked the 7 criteria[17].
- Initially, the VWG selected and scored 15 HHs. The MVF list was displayed on an information board in the village. 3 days after the announcement, some villagers complained about one HH. The VWG decided to take that HH out Since that time, no complaint has come forward.
- However, another 13 HHs have been added without scores.

3.3 Questionnaire results

The questionnaire contained three questions that are relevant to process:

- One question probing if the respondent had attended the Village Planning Meeting during which the draft MVFL was presented, with a follow up for those who did attend, asking if the draft was actually presented.
- One question probing if the respondent knows any families at least as poor as his/hers that are not on the list (asked to 15 listed HHs in each village), and, if so, to identify these potential false exclusions.
- One question probing if the respondent knows any families considerably richer than his/hers that are also on the list (asked to 15 listed HHs in each village), and, if so, to identify these potential false inclusions.

As is evident from the above VWG member information, meetings have taken place in all villages and lists were either read out or villagers were referred to the copies displayed on an information board.

Table 3A presents the results for the question about attendance of this meeting and display of the list during the meeting. Attendance is quite high with between 60 to 80% of all HHs interviewed having participated. Curiously, confirmation of the VWG claim that (the names of) a draft list were presented is not close to 100% but varies from 68% to 82% (on average 23% said no such list was presented).

[17] The VWG did not go to villagers' houses before the village meeting because they wanted to avoid villagers' protests. The VWG also claimed insufficient time to go to villagers' houses because the village meeting was held soon after the training.

Table 3B in annex 12 confirms what common sense would expect the attendance rate of *listed* HHs is substantially HIGHER than that of non-listed HHs, and *listed* HHs are substantially more likely to report that a list had been displayed during the meeting.

Table 3A: Two-thirds of HHs attended the Village Planning Meeting. A quarter claim no draft MVF List was presented

		Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	Total
Did you join the Village Planning Meeting?	Yes	63	76	78	62	63	342
	No	39	29	23	38	37	166
Total		102	105	101	100	100	508
If YES, was a draft MVF List presented for comments?	Yes	43	59	64	49	49	264
	No	20	17	14	13	14	78
Total		63	76	78	62	63	342

The questions about false inclusions and false exclusions was only asked to 15 listed HHs in each village, replicating the methodology used during the MVFL check in Kampong Thom (and saving time). The very small number of answers to these questions[18] – especially compared to Kampong Thom - indicates an overall acceptance of the MVFL procedure. We conclude that repeating the MVFL process over the years has familiarized villagers with its purpose and reduced suspicions. The results are presented in annex 12, table 3C.

[18] In total 17 HHs were identified by 12 of the 75 respondents who were asked these questions. All HHs were identified by one respondent only.

Summary of main results regarding process

- Repeating bears fruit. Villagers understand and accept the MVFL process more than before
- VWG are male dominated but active participation is not a question of gender, but of professional experience and position
- The process is participatory but limited to those with education and position
- The process was followed much more systematically in some villages than in others. Especially the way the first draft was created varied from totally in-line with the intended procedure to the village chief drafting it on his own.
- However, the resulting draft list was available for public inspection in all villages
- Criteria remain a real issue. VWG 'work their way around' the inherent difficulties, but the comparability is necessarily compromised by these local 'adaptations' (specific definitions of inherently 'vague' criteria and/or taking additional criteria into account).
- The VWG had most difficulties with the housing and income criteria; they were positive about the removal of land holding as a criterion because they felt it was a problematic indicator: not holding but actual production is what matters.
- (Implicit) ceilings on the number of families on the list is problematic for the poorest villages
- The integration with the CIP process forced a lot of time pressure on the MVFL process; for the next update allowing for more time, especially for properly drafting the first MVFL[19], is strongly advised.
- Real ownership assumes more capacity building. The ToT approach has limitations. Those only indirectly trained have much less grasp of the process than those directly instructed by DFCT members and GTZ staff. Sometime understanding was below the minimum level required for productive participation.
- Some procedural requirements seemed under-resourced. Basics like having copies of the lists and the HH scores at the various administrative levels involved (village, commune, district) and storing these for future reference were not fulfilled everywhere. Further awareness-raising regarding the NEED for this (transparency, accountability), and ensuring that the material resources to do it are not a problem is necessary.
- Integration with the CIP process has obvious prospects for ensuring the continuing availability of resources after outside support is withdrawn. However, for this integration to reach a level that is sufficient to make MVFL a standard component of the CIP process, with an accompanying allocation of financial and other resources, at least one or two more years of outside facilitation seem needed. Reaping the fruits requires some more repeats.

[19] I.e. through appropriate information gathering, discussion, and assessment in terms of criteria by a VWG of which a variety of members is actively participating in its proceedings.

4. Results poverty identification update outcomes

4.1 General comparison of the poverty situation across 5 villages

Annex 3 contains the basic tabulations of for all variables of the data set. Nearly all tables disaggregate by village. In this section we combine the results that indicate poverty into one overview to inspect what the data set tells about the poverty status of the five villages. For each variable we assign an ordinal rank to each village. E.g. in terms of female headed HHs, Thmei tops the list with 48%, followed ex equo by Prey Pi and Krasang Meanchey, which hardly differ in % (32, resp. 33) and are thus both assigned rank 2 (rather than giving Prey Pi rank 2 and Krasang Meanchey rank 3); and then Trapeang Thom and Damnak Kralanh, that also hardly differ, and are both assigned rank 4. This will allow for a rough comparison across variables.

Table 4A General comparison of the poverty situation across 5 villages

	Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	Total/ Average
Total HH	267	221	311	218	113	1130
Listed HH	43	46	111	53	27	280
% of total	16%	21%	36%	24%	24%	25%
RANK	5	2	1	2	2	
Female headed HH	27%	32%	33%	48%	25%	33%
RANK	4	2	2	1	4	
Labor ratio	52%	46%	47%	63%	62%	56%
RANK	3	1	1	4	4	
No education HH head	33%	42%	31%	36%	19%	32%
RANK	3	1	3	2	5	
Chronically ill	3%	3%	2%	8%	5%	4%
RANK	3	3	3	1	2	
Handicapped	-	1%	2%	5%	2%	2%
RANK	2	2	2	1	2	
Trimmed Mean[20] income/year/capita	59	22	18	33	38	33
RANK	5	2	1	3	3	
HH with outstanding loans	69%	66%	78%	64%	47%	33%
RANK	2	3	1	4	5	

[20] The trimmed mean excludes the 5% outlying (extreme) values. This is usually a better representation of reality. E.g. regarding income, one or two very rich HHs can have a disproportionate influence on the mean income in the village. For all variables in this table, both the trimmed mean and the normal mean can be found in annex 3. Using the normal mean does not change the picture of the overall poverty situation.

	Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	Total/ Average
Trimmed mean outstanding loans	26	25	24	24	56	28
RANK	1	1	1	1	5	
HH head often or always sick	25%	33%	37%	48%	29%	34%
RANK	5	3	2	1	4	
HH often faces a crisis	9%	31%	22%	27%	13%	20%
RANK	5	1	3	2	4	
Experienced crises during last year	111	268	257	259	215	1110
RANK	5	1	1	1	4	
Trimmed Mean cultivated land (ha)	0.6	1.1	0.6	0.5	1.2	0.8
RANK	2	1	2	2	1	
Weighted average land quality	2.4	2.0	2.4	2.2	2.1	2.1
RANK	3	1	3	2	2	
Rain water (farming): dry season	13%	48%	36%	37%	34%	34%
RANK	5	1	2	2	2	
Trimmed Mean value transportation assets	8	20	3	12	26	13
RANK	2	4	1	3	5	
Trimmed Mean value other assets	30	25	14	19	61	26
RANK	4	3	1	2	5	
Old and dilapidated house	18%	29%	37%	41%	13%	27%
RANK	4	3	2	1	5	
Very small house	20%	38%	51%	51%	9%	
RANK	4	3	1	1	5	
Trimmed Mean value animals	127	193	48	141	290	163
RANK	2	4	1	3	5	

	Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	Total/ Average
Permanent employment HH head	52%	11%	7%	19%	30%	24%
RANK	5	2	1	3	4	
Trimmed Mean yearly HH expenditure/capita	75	73	62	82	113	81
RANK	2	2	1	4	5	
Rice bought on daily basis	62%	34%	61%	24%	11%	38%
RANK	1	3	1	4	5	
Enough rice for > 6 months	27%	20%	16%	47%	86%	39%
RANK	3	2	1	4	5	
Hunger often/always	20%	33%	60%	19%	18%	32%
RANK	3	2	1	3	3	
Eat rice porridge often/always	15%	17%	48%	12%	6%	22%
RANK	2	2	1	4	5	
Totals 1	2	8	15	8	1	34
Totals 2	7	8	6	6	4	31
Totals 3	6	7	4	5	2	24
Totals 4	4	2	0	6	6	18
Totals 5	6	0	0	0	12	18
TOTAL	80	53	39	59	99	330
Summary poverty ranking	**3**	**2**	**1**	**2**	**4**	
Listed HH	**43 (16%)**	**46 (21%)**	**111 (36%)**	**53 (24%)**	**27 (24%)**	

All monetary amounts are in 10,000 Riel (US $ 2.5)

The summary scores show that Krasang Meanchey is the poorest village, a finding confirmed by the relatively large number of HHs on the MVFL. Below (see 4.3.2) the status of Krasang Meanchey as the poorest village is supported by the large number of false exclusions for this village. The village is so poor that it is not easy to differentiate between HHs that should be on and off the list. And it is not easy to keep he numbers of those on the list within the (unwritten) limits of how long a village MVFL can be. The very first draft had even more HHs on it but was send back by the commune with instructions to trim it down.

Trapeang Thom and Damnak Kralanh are better off villages. For Trapeang Thom this is confirmed by fewer HHs on the MVFL while false inclusions and negatives do not stand out (see below). Damnak Kalanh's better off status is not reflected in a proportionately shorter MVFL. One would then expect that the quality of the list is compromised. This is indeed the case: the village stands out for its relatively high percentage of false inclusions (see below 4.3.1). It also stands out for its relatively small percentage of false exclusions (see 4.3.2), while the non-listed sample of the village was the largest of all, i.e. the chances of discovering false exclusions the biggest.

Obviously, the summary score lumps apples and pears together and one may wonder if the picture changes if one looks at more specific indicator sub-sets. And some types of indicators can legitimately be considered more telling than others. Table 4B (see annex 13) breaks the summary score down into a couple of more specific types of poverty indicator. Particular villages switch place in the rank order of particular types of indicators but the overall picture does not change. We can thus trust the robustness of this assessment.

Summary of main results regarding overall poverty status

- The survey provides us with an internally consistent picture of poverty differentials between villages. Some villages are poorer than others.
- These differences are NOT proportionately reflected in the number of HHs on the MVFL[21].
- Where the village is really very poor implicit ceilings on what is an 'admissible' percentage of HHs on an MVFL results in an above average percentage of false exclusions.
- Where a village is much richer than average but does not cut down its percentage of HHs on the MVFL, the percentage of false inclusions is bound to be above average.

4.2. Calculations of total scores by VWG

The accuracy of the adding of the criteria scores on the VWG scoring lists was checked. The results show that the summations have been done with great accuracy in all villages for which we had scoring sheets, apart from Damnak Kralanh.

Table 5: Accuracy of criteria scores addition by VWG

	Damnak Kralanh Lech	Krasang Meanchey	Prey Pi	Thmei	Trapeang Thom	Total
Correct	4	88	39	NA	34	165 (95%)
Incorrect	9	0	0	NA	0	9
Total	13	88	39	NA	34	174

The error made in Damnak Kralanh was systematic: in all cases wherein the housing situation was scored "extremely poor', also the 'very poor column' got a score while the procedure specified that only one column could have a score (either extremely poor OR very poor OR none)[22]. This mistake did not alter the categorization and the results are not affected.

Summary of main results regarding accuracy of how VWGs added the criteria scores

- The additions have been done with great accuracy in three of the four villages for which we had scoring sheets.
- The one exception was an error that did not alter the results in a significant way.

[21] As a reminder: we do not claim these figures are statistically representative for the MVFL process in Kampot province.

[22] In the addition the scores for the very poor was added to the total of the extremely poor in the case where this resulted in a total of 16 and *substracted* from the total of the extremely poor column in the cases where adding would have resulted in a score of 17 or more.

4.3 Congruency between listed scores and questionnaire scores

4.3.1 False inclusions

False inclusions can be checked for all listed HHs. Table 6 below gives the overview for all those HHs. We define False inclusions as HH wrongly listed based on a CAS score *at least 2 points* below the required minimum of 6, i.e. a HH with a CAS score of 5 is not identified as a false positive, but HHs with a CAS score of 4 or lower are. This definition ensures that we do not to make too much of an arguably small difference in poverty assessment. Overall we identified 12% false inclusions.

Table 6 below shows where these false inclusions are located:

Table 6 False inclusions per village

	Listed HHs Interviewed	Total CAS score					Total
		1.00	2.00	3.00	4.00	5.00	
Trapeang Thom	35				3	1	4
False inclusions					**3 (9%)**		
Prey Pi	42	1	0	2	4	1	8
False inclusions					**7 (17%)**		
Krasang Meanchey	89			1	1	4	6
False inclusions					**2 (2%)**		
Thmei	46			4	4	7	15
False inclusions					**8 (17%)**		
Damnak Kralanh	24	2	4	2	1	5	14
False inclusions					**9 (38%)**		
Total	236						
False inclusions Total					**29 (12%)**		47

There are obvious differences between the four villages.

The village that came up as poorest in our overall poverty assessment, Krasang Meanchey, with by far the most listed HHs (36%, see table 2), has a negligible number (2%) of false inclusions, confirming our assessment that its relatively long MVFL reflects reality.

The village that came up as richest in our overall poverty assessment, Damnak Kralanh, with an average number of listed HHs (24%), has a high number (38%) of false inclusions, confirming our assessment that the MVFL is too long for the village's poverty status and the quality of the list is compromised (see above analysis under 4.1).

Summary of main results regarding false inclusions

- Overall there are 12% false inclusions across five villages. This percentage refers to the sub-sample of HHs on the list.
- The proportion of false inclusions is a function of the overall poverty status of the investigated villages AND the extent to which the % of HHs on the MVFL reflects this overall poverty status.
- The poorest village, Krasang Meanchey, with a list that is shorter than it should have been had the least false inclusions (2%).
- Of the two richer villages the one that reflected it wealthier status by including a relatively low percentage of HHs in its MVFL, Trapeang Thom, had the next lowest number of falser positives (9%)
- The other, richest village, Damnak Kralanh, with a MVFL that has as many HHs on it as much poorer villages, had the highest number of false inclusions (38%)

4.3.2 False exclusions

In each village we interviewed HHs not on the list. The selection criterion for the non-listed HHs was their likelihood of being a false negative. We asked VWG members to point out non-listed HHs that they considered - in terms of poverty status – to be most similar to the listed HH.

Table 7 below presents the overall scores:

Table 7 False exclusions per village

		Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	Total
CAS Score	.00	4	3	0	5	19	31
	1.00	10	6	0	5	18	39
	2.00	7	9	2	9	18	45
	3.00	14	9	1	6	11	41
	4.00	6	10	1	7	2	26
	5.00	6	10	1	7	1	25
		47	47	5	39	69	207
	6.00	8	6	1	6	2	23
		55	53	6	45	71	230
	7.00	6	4	2	5	5	22
	8.00	3	4	3	2	0	12
	9.00	2	0	0	1	0	3
	10.00	0	1	1	1	0	3
	11.00	1	0	0	0	0	1
	12.00	0	1	0	0	0	1
False exclusions		**12 (15%)**	**10 (16%)**	**6 (50%)**	**9 (17%)**	**5 (7%)**	**42 (15%)**
Total		67	63	12	54	76	272

The results are quite consistent across villages with the exception of Krasang Meanchey. In all other villages a fair-sized sample of purposively selected false negative candidate HH results in approx. 15% false exclusions. Damnak Kralanh – which has the biggest sub-sample (76 HHs) shows an even less false exclusions (7%).

The sample of Krasang Meanchey is very small, because the number of listed HHs is so big and left hardly any room for including non-listed HHs[23].

It seems telling that Krasang Meanchey did only have one false positive, although the listed and scored sample was by far the largest of all villages. This again indicates that the results above reflect reality. Krasang Meanchey village has so many poor families that the 'normal' proportion for MVFL HHs (25%, see table 2) is indeed way too low. The general poverty comparison of the five sample villages (see above) supports this conclusion.

Summary of main results about false exclusions

- 15% of the sub-sample of non-listed HHs were identified as false exclusions.
- The conclusions regarding false exclusions are the mirror image of those about false inclusions: The proportion of false exclusions is also a function of the overall poverty status of the investigated villages AND the extent to which the percentage of HHs on the MVFL reflects this overall poverty status.
- The poorest village, Krasang Meanchey, with a list that is shorter than it should have been had the most false exclusions (50%).
- The richest village, Damnak Kralanh, with a MVFL that has as many HHs on it as much poorer villages, had the lowest number of false inclusions (7%).

[23] In fact, the non-listed HHs could only be included because the team could not interview some of the listed HHs.

4.3.3 Overall Accuracy Assessment

The above false positive and false negative assessments are both based on *sub-samples*. The *false positive* assessment takes the *listed HHs* for a basis, the *false negative* assessment takes the *non-listed HHs* for a basis. The percentages – 12% false inclusions and 15% false exclusions - have to be understood in that context.

For an *overall* assessment of the accuracy of the MVFL across the five villages, based on the *total sample* of 508 HHs, the picture looks as follows:

Table 8: Overall 14% of the sample was inaccurately listed as poor or non-poor

	Nrs of HHs	**Accurate versus inaccurate**	**Nrs of HHs**	**% of sample**
HHs correctly[24] on an MVFL	189	Accurately listed	396	78%
HHs correctly not on an MVFL	207			
False inclusions	29	**Inaccurately listed**	71	**14%**
False exclusions	42			
Borderline HHs[25]	41	Indeterminate	41	8%
TOTAL	508		508	100%

Main result regarding overall accuracy of the MVFL process
For these five villages[26], 14% of the HHs were incorrectly identified as poor or non-poor.

4.3.4 The criteria: differentiating between extremely and very poor

Apart from investigating if HHs are correctly listed in or excluded from the MVFL, having VWG scores and CAS scores also enables us to say something about the extent to which using criteria is a basis for differentiating between levels of poverty: extremely poor versus very poor.

The table below compares VWG scores and CAS scores for the four villages for which we have VWG scores.

[24] Correctly refers to a listed or non-listed status, as per VWG assessment, that was confirmed by the CAS survey team's assessment.
[25] HHs on the borderline of listed or non-listed, for which the VWG score and the CAS score only differs 1 point, rather than the required 2 that would define them as false exclusions or inclusions (i.e. 18 listed HHs with a score of 5 and 23 non-listed HHs with a score of 6).
[26] As a reminder: we do not claim these figures are statistically representative for the MVFL process in Kampot province.

Table 9A: Comparison across four villages of scores VWG and scores CAS

		CAS score															Total
		1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	16.00	
VWG Scores	7.00	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	3
	8.00	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	3
	9.00	0	0	0	1	0	1	2	0	2	0	0	0	0	0	0	6
	10.00	0	0	1	0	0	1	1	0	1	0	1	0	0	0	0	5
	11.00	1	0	0	0	2	3	2	3	1	1	0	0	0	0	0	13
	12.00	0	0	2	2	1	1	7	0	1	0	1	0	0	0	0	15
	13.00	1	0	0	0	1	3	2	3	2	0	2	1	0	0	0	15
	14.00	0	0	1	0	0	0	2	0	2	0	3	2	1	0	0	11
	15.00	0	0	0	1	0	4	5	4	4	4	7	1	3	0	0	33
	16.00	0	0	1	3	5	8	7	14	8	5	7	6	3	2	1	70
Total		2	0	5	9	9	21	29	25	23	10	21	10	7	2	1	174
Number for which VWG scores are at least 2 points HIGHER than CAS scores		25					91				45						**161 (93%)**
Number for which VWG scores are at least 5 points HIGHER than CAS scores		23					93										116 (67%)
Number for which VWG scores are 2 points LOWER than CAS scores		0					1				0						1 (1%)

What is striking about the table 10 is the big difference in scores, also for the HHs that are legitimately on the list, i.e. have CAS scores of 6 or more. In 94% of cases, scores differ at least 2 points, in 93 out of those 94% The CAS score is LOWER. In 67% of cases, the scores differ at least 5 points, always the CAS score being lower.

Thus, the VWG scored many more HHs extremely poor than the CAS survey:

Table 10: Extremely poor versus very poor: VWG and CAS totals

	Extremely poor	**Very Poor**
Village Working Group	157	17
CAS survey scores	41	108

This implies that although the criteria and their variables agree on the list status of the HHs on the updated MVFL, they do result in different poverty profiles of the villages assessed. Table 9B in annex 12 provides more detail about the poverty indicators used.

The table provides the following insights into the differences and the similarities between the VWG criterion assessments and the CAS variables:

Overall, criteria and assessments are quite similar across criteria/variables. The biggest differences are on the housing and the income situation indicators. Especially housing differs substantially: the VWG criterion identified three times as many poor families as the survey indicator. The income criterion identifies close to twice as many poor HHs as the combination of survey indicators. One may refer to the process assessment finding that these two were also the ones that VWG struggled with most.

Table 11 below summarizes the information in table 10B in terms of the indicators for which the VWG or CAS identified MORE extremely poor families. For quite a few indicators the variables and criteria both identify a HH as poor but the survey variables identifies many more HHs as *very* poor while the VWG criterion assessment identifies many more HHs as *extremely* poor:

Table 11 CAS and VWG indicators and the extremely versus very poor distinction

	More CAS extremely poor	**More VWG extremely poor**	**VWG & CAS equal extremely poor**
Housing situation		X	
Rice and other crops production		X	
Income situation		X	
Cattle			X
Means of transportation			X
Media equipment and other valuables		X	
Food security	X		
Total	1	4	2

Thus, on 4 of the 7 indicators the VWG criteria produce more extreme poor scores, one of which is housing which counts double (see annex 4), while the survey variables only outdo the VWG criteria on 1 indicator[27]. The two criteria that produced similar results in the VWG and the CAS

[27] In figures (see table 10B) across all 7 indicators the survey has 523 extremely poor scores while the VWG sheets have 904, or if one takes the double weight of housing into account: 537 versus 1048.

assessments were the ones that are unambiguous and publicly well known because they are visible to all villagers: cattle and means of transportation.

Summary of main results regarding differentiating between extremely and very poor

- The MVFL procedure is reasonably accurate regarding the *identification* of MVF but is not very accurate in differentiating between extremely and very poor families.
- The VWG tend to either include or exclude families and when they include them assign 'extreme' scores on most indicators.
- A probable reason for this is that criteria scores are used to legitimate the listed status of the HHs on the MVFL.

5. Comparing results of various poverty identification criteria-models

In this section we compare the Kampot MVFL model for poverty identification with various other models, nearly all used for identifying eligible HHs for subsidies from Health Equity Funds. Before delving into the substance of the comparison we want to stress what the output comparison we make CAN and CANNOT deliver.

The comparison does NOT tell us anything about the comparative QUALITY of the various models. Output quality needs an assessment in terms of the validity and the reliability of the model, neither of which we can say anything about. The comparison does not tell us if the HHs identified by any of the models, including the Kampot MVFL model, are the "right" HHs. It is only going to tell to what extent they tend to identify the same HHs as poor. It is going to tell how similar or dissimilar the "outputs" of the various models are to each other and to that of the Kampot MVFL model in particular.

The importance of this comparison is that it can help us decide if we need to worry about the plethora of poverty identification models currently in use. If the various models differ a lot in their design but nevertheless produce very similar outputs it is quite probable that it does not really matter WHAT criteria are being used and HOW they are exactly aggregated and used as a basis for assessing the poverty status of HHs. Obviously, it is not a full-proof basis for complacency – the various models could collectively identify the "wrong" HHs as poor (the validity aspect), or applying the models to another sample of HHs might generate very different results (the reliability aspect) – but with six different models, the odds would certainly be in our favor. If, on the other hand, the outputs are very dissimilar, we are sure to have reason for worry.

Poverty identification is normally done for practical purposes. For individual HHs, being identified as either poor or non-poor has material consequences (e.g. they do or do not qualify for HEF subsidies). One thus rightly worries about false positive and false negative identifications. The strength of applying a variety of models on one and the same sample of HHs is that dissimilar outputs signify that at least some of the models are not doing a good job, IRRESPECTIVE of which HHs are "really" poor.

5.1 The poverty identification models compared

We compare the poverty identification model of GTZ Kampot with 5 other models. The choice of these models is opportunistic: information about their criteria and weights was easily available. However, they differ more than enough to be a good basis for this explorative analysis.

Table 13 below gives a summary overview of the models in terms of the kinds of criteria they use to identify poor HHs.

Table 12

POVERTY IDENTIFICATION MODELS: criteria categories and their relative weights						
CRITERIA CATEGORIES	**GTZ Kampot**	**GTZ Kampong Thom (Rural)**	**CDFS Monkul Borey CFDS Sompou Meas**	**AFH Mung Russey AFH Chlong**	**Kirivong**	**UNICEF Svay Rieng**
Land under cultivation	Also part of food security	1	1	3	3	1,5
Animals, incl. poultry	1	1	1	2	1	2
	Also part of income			Also part of assets		
Assets, incl. residential land + traction animals, debts	2	3	2	6	1	1
Housing	2	1	1	4	3	1
Electricity/lighting				1,5		
Income	1		1	2	3	
Expenditure			1	1		
Occupation	Also part of income	1	1			1
Health & other crises			2	1,5		
Education, literacy			1			
Food security/Hunger	2	1				
HH Characteristics			1	1	1	2,5
Total nr. of criteria (un-weighted)	**7**	**8**	**12**	**15**	**6**	**9**

Annex 8 gives a detailed overview of various poverty identification models in terms of their criteria and weights and the summary score break-off points for deciding if a HH is very poor or not so poor (the detailed information about the Kampot MVFL model is described in annex 4).

Table 13 shows that only 3 KINDS of criteria are shared by all 6 models:

- Animals, incl. poultry
- Assets, incl. residential land and traction animals, debts
- Housing

And when one checks at a more detailed level (see annexes 4 and 8), NO ACTUAL criterion is shared by all 6 models.

The models also differ considerably in the number of criteria they use to establish the poverty status of a household (from 6 to 15, see table 13).

Further inspection of the detailed tables in annexes 4 and 8 shows that the various models also greatly differ in the range of the aggregate scores and the break-off points to establish HHs as more or less poor. In fact, one of the models – the CFDS model – appears in two versions in annex 8 and in the comparative analyses below because it is applied with slightly different break-off points in two HEF schemes. Various schemes also differ in the number of levels of poverty that they identify: anywhere from only differentiating between poor and non-poor to allowing for three sub-categories of poor.

All the models are designed to cover rural settings. By way of example we have added an annex (9) describing a poverty identification model used in an urban context (Phnom Penh, Health Equity Fund manager: USG).

Summary of main results regarding the poverty identification models that are being compared

The various models differ in so many aspects that it is impossible to really compare them beyond a basic 'output' comparison.

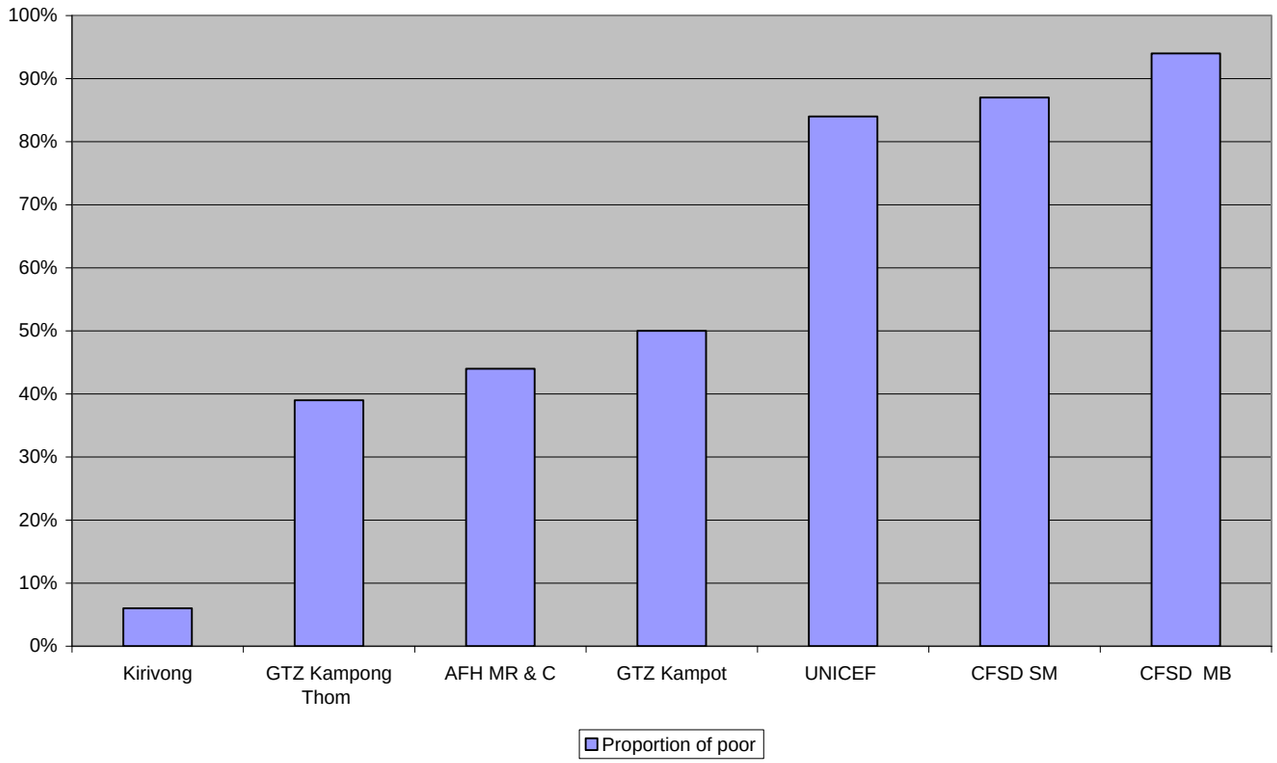
- The models differ in the number of criteria used
- The models differ in the kinds of criteria they use
- The models differ even more at the level of the actual criteria
- The models differ in the weights given to criteria
- The models differ in their scoring ranges at criterion level and their range of scores at aggregate level
- The models differ in the break-off points between levels of poverty
- The models differ in the number of levels of livelihood that they differentiate between

5.2 Proportions of poor HHs identified by various poverty identification models

A first and basic output aspect to compare the various poverty identification models is the proportion of poor HHs that they identify.

Figure 1

Proportion of poor amongst the 508 HHs surveyed in Kampot identified by the various models varies greatly



The picture is unambiguous: the results could hardly have differed more. While the Kirivong model identifies only 6% of the 508 HHs of our Kampot sample as poor, the CFDS model with the most lenient break-off point (applied in Monkul Borey) identifies 94% as poor. Of the five comparison models[28], only two identify proportions of poor in the same order of magnitude as the Kampot MVFL model: the Kampong Thom MVFL model (39%) and the AFH model (44%).

Annex 13 contains the detailed tables comparing the CAS scores for the Kampot model with the scores for the other poverty identification models on which the above figure and the figure 2 of the next section are based. These tables show:

- The number of HHs identified as poor/non-poor by the model[29].
- The number of HHs identified as poor that are also identified as poor by the Kampot MVFL model
- For both of the above a version that takes the break-off points with a margin of an additional point (for similar reasons as taking a margin when identifying false inclusions or negatives). Because the output comparisons based on results with a margin are structurally very similar to those based on the actual break-off points we only report on the latter.

[28] Because the two CFDS models only differ in the post-hoc brake-off point for poor versus non-poor, although we report on them separately, we treat them as one.

[29] Most models made sub-differentiations within the category of poor HHs. These are not taken into account in this analysis and thus not made explicit in the tables but those interested can look up the break-off points for the sub-categories in annex 8 and apply them to the information in the table in annex 13.

5.3 Extent of identification-overlap at household level

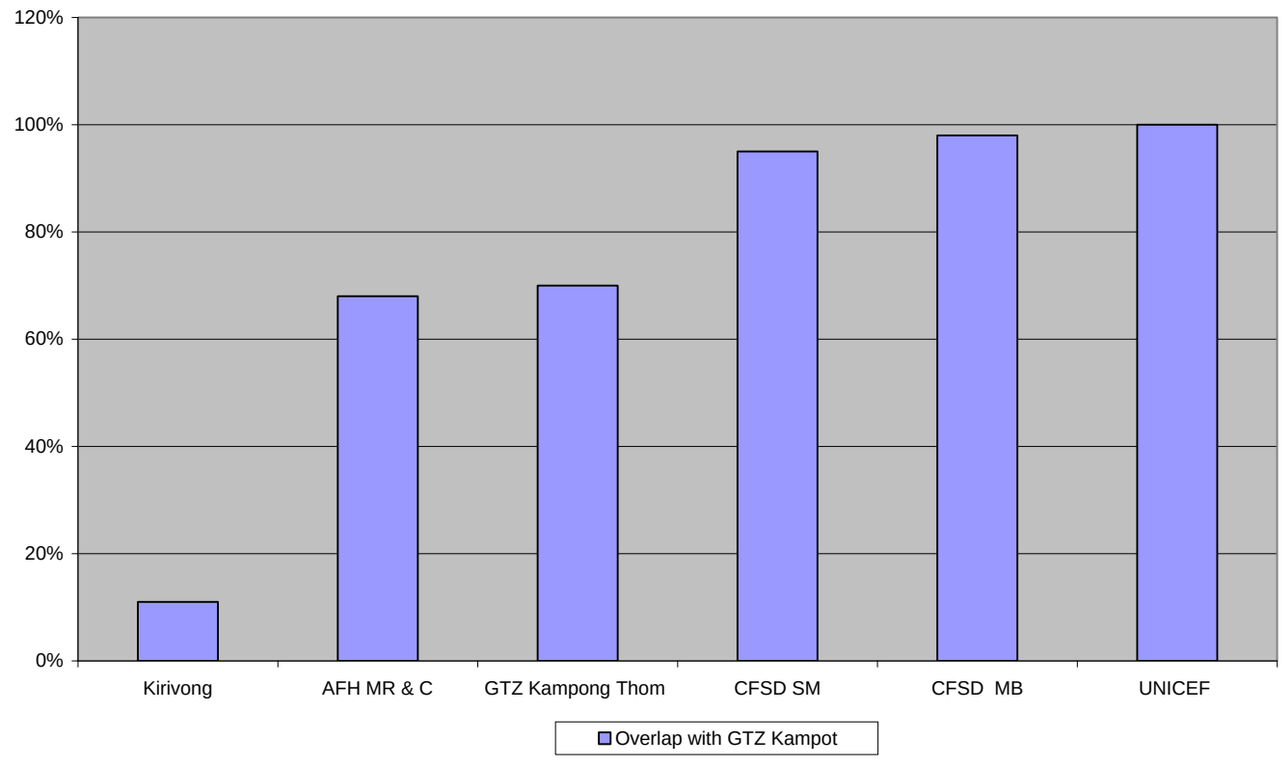
A second output aspect to compare the various poverty identification models is the overlap with the Kampot MVFL model at the level of individual HHs that are or are not identified. The Kampot MVFL model identifies 50% of the 508 HHs surveyed as poor. In theory, another model could also identify 50% of those HHs as poor without ANY overlap at the level of individual HHs with the Kampot MVFL model.

As argued in the introduction to this section, identifying the SAME HHs as poor is much more indicative of models being equivalent than the overall proportion of poor HHs identified by them. Even small changes in the break-off points immediately alters the proportion of HHs identified as poor by one and the same model: see the difference between CFDS MB – 94% - and CFDS SM – 87% - in figure 1. But all HHs identified as poor by CFDS SM are also identified as poor by CFDS MB.

Figure 2 below shows the performance of the various models in terms of this output aspect:

Figure 2

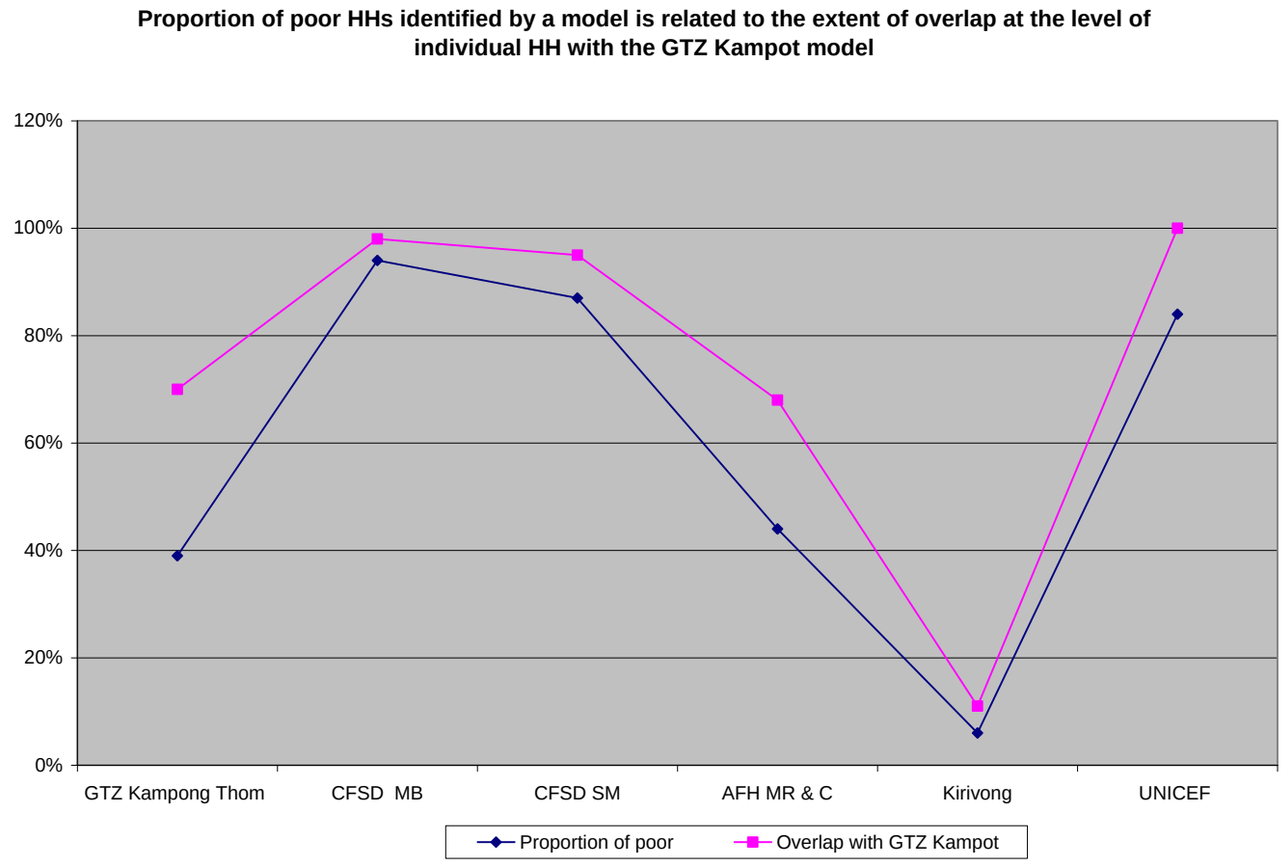
Overlap between the various models and the GTZ Kampot model in terms of individual HHs identified as poor or non-poor



Again, the picture is unambiguous. While the Kirivong model only identifies 11% the HHs rated poor by the Kampot MVFL model as poor, the UNICEF Svay Rieng model identifies 100% of these HHs as poor.

Figure 3 shows, as anyone having had a closer look at figures 1 and 2 will have seen already, that there is an obvious relationship between the proportion of poor identified by a model and the extent of overlap at HH level with the Kampot MVFL model.

Figure 3



In other words, we do not find our fictitious example of another model identifying a similar proportion of poor HHs but all different HHs. However, the match does not look perfect. The two curves are not equidistant for each model. Obviously, this is also not expected: when the proportion of poor identified by a model is < 50%, the overlap is by necessity < 100%. It is maximally 2 * the proportion (i.e. for the Kirivong model which identified 6% poor HHs, the maximum possible overlap at HH level is 12% - in reality it is 11%, for the Kampong Thom MVFL model which identified 39% poor HHs, the maxim overlap is 78%, in reality we found 70%, etc.). Only when the proportion of poor HHs is 50% or more 100% overlap becomes theoretically possible. However, the closer the proportion of poor HHs gets to 100%, the less meaningful a high overlap becomes. With 94% of all HHs identified as poor (CFDS MB) it is very likely that those identified by the Kampot MVFL model are (nearly) all included: as they indeed are: 98%.

We have designed a similarity indicator that takes both the proportion of poor identified AND the overlap at HH level with the Kampot MVFL model into account.

Similarity Indicator
The formula for this indicator is:

Similarity Indicator value (Model A) = 1 – [Absolute value (proportion of poor identified by model A – proportion of poor identified by GTZ Kampot) + (((proportion of poor identified by model A – proportion of poor identified by GTZ Kampot) + 100%)] – proportion of overlap with GTZ Kampot)

The "1 –" part of the formula is to create an indicator with a highest value of 1 indicating total similarity and a lowest value of 0 indicating total dissimilarity.

The first part of the [] formula results in a percentage between 0 and 50 with values closer to 0 indicating a proportion of poor (very) similar to the proportion of poor identified by the Kampot MVFL model. The second part also results in a percentage between 0 and 50, with, again, values closer to 0 indicating an overlap at the level of individual HHs closer to the maximum possible value. The second part formula compensates for the bias that high proportions of poor tend to go along with high levels of overlap at HH level.

To provide a feel for what the values of this indicator signify, figure 4 below shows the indicator curve for five levels of overlap at HH level: the maximum level – e.g. when proportion of poor is 45%, overlap is 90% - at 0.75 of max – e.g. when proportion of poor is 45%, overlap is 67.5%, and at 0.5 of the maximum, 0.25 of the maximum and at the minimum level of overlap possible (i.e. the first % of overlap appears at 51% of poor).

As one can see, the curve for maximum overlap approximates a normal distribution curve. With lesser levels of overlap, the curve flattens, but when the overlap drops below 50% of maximum level, its shape starts to change, with parts of the curve dropping below zero. This needn't worry us because if overlap at HH level drops below 50% we are not looking at a very comparable model in the first place. The bell-shaped curve for maximum overlap can be seen as the standard against which we can benchmark the values of our comparison models.

Figure 5 gives the values for the similarity indicator for the poverty identification models that we compare in this analysis. Even the two most similar models, GTZ Kampong Thom (indicator value 0.7) and AFH (indicator value 0.68), have indicator values that do not signify great similarity. As figure 4 shows, anything below 0.8 does not really count as a reasonable match with the Kampot MVFL model.

Figure 4

Similarity indicator curve for different levels of overlap with GTZ Kampot model

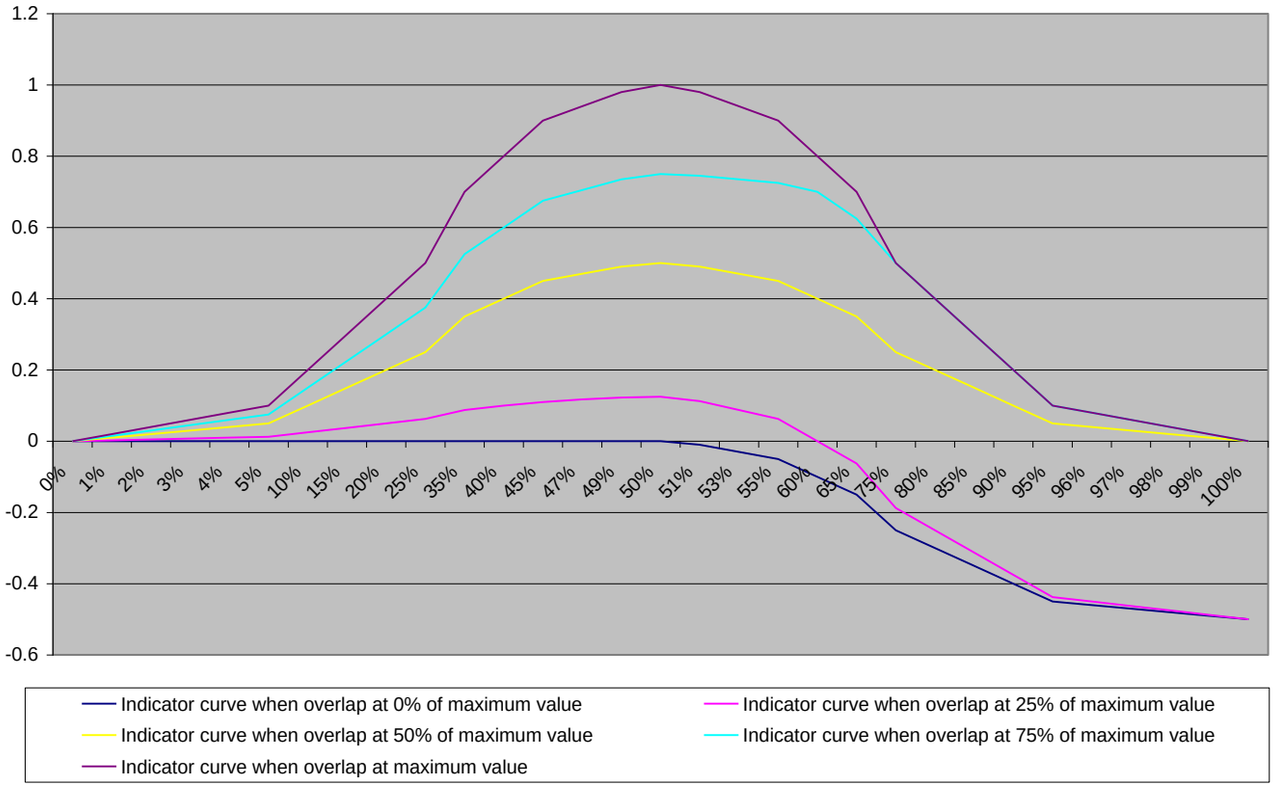
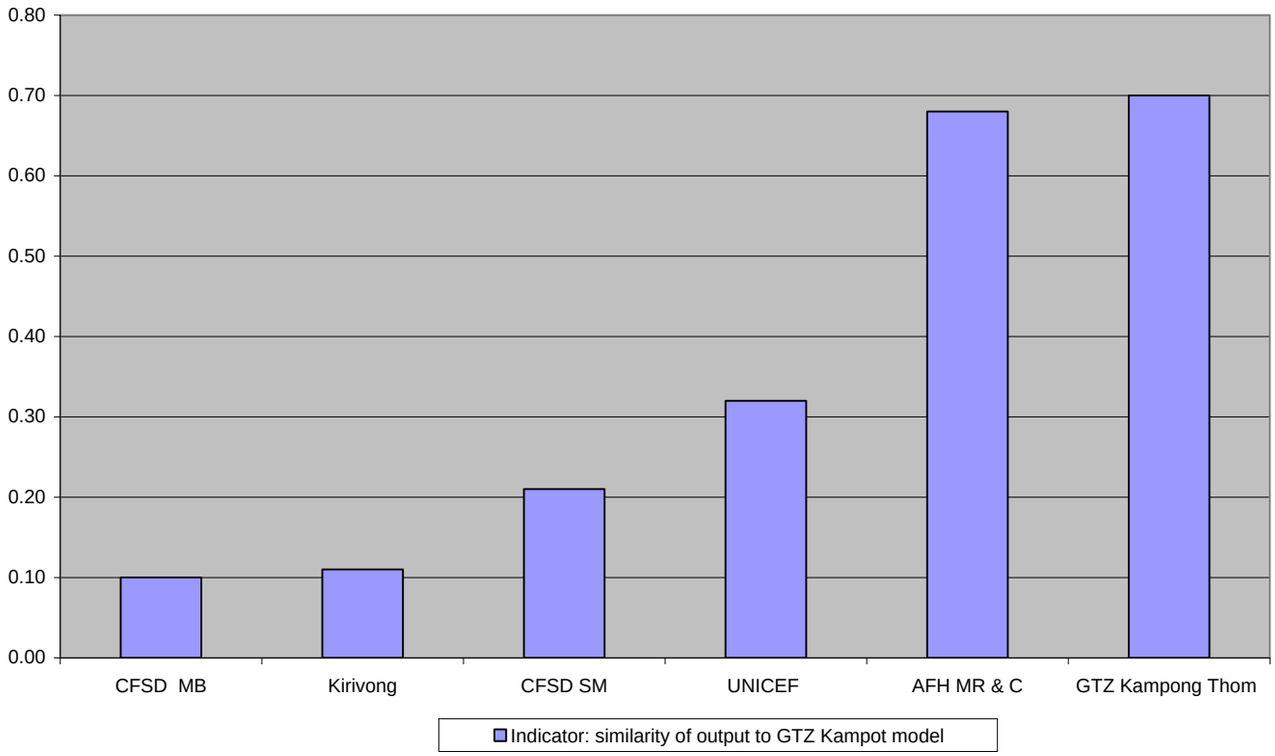


Figure 5

The similarity of the output of the various models to that of the GTZ Kampot model (1 is maximum similarity)



Summary of main results regarding the output comparison between the models and the Kampot MVFL model

- The proportion of poor amongst the 508 HHs surveyed in Kampot identified by the various models varies greatly (from 6% to 94%).
- The overlap between the various models and the Kampot MVFL model in terms of individual HHs identified as poor or non-poor also varies greatly (from 11% to 100%).
- There is an obvious but biased relationship between the proportion of poor identified by a model and the extent of overlap at HH level with the Kampot MVFL model.
- An indicator for the similarity of poverty identification models to the Kampot MVFL model shows that none of the other models is really very similar.

5.4 Comparison across all models

All of the above comparisons take the Kampot Kampot MVFL model as their basis. Not because this model is the best model but because comparisons need a base and, given the background of this comparison, taking the Kampot MVFL model is the natural choice.

However, one might wonder how similar or dissimilar the models are in more *general* terms. This paragraph looks into this but only takes five models into account:

- GTZ Kampot
- GTZ Kampong Thom
- AFH
- UNICEF Svay Rieng
- CFDS Sompou Meas

We leave CFDS Monkul Borey and Kirivong out of the comparison because they identify such high respectively low proportions of poor HHs that comparing overlap with other models is not very informative.

A first and basic issue to look at is how many HHs are identified as poor by ALL five models: 27% of the 508 surveyed HHs (see table H, annex 13). If we would take GTZ Kampot as a base, this would translate into an overlap of 53%, quite a bit lower than the overlap with GTZ Kampong Thom (70%), which is the model that identifies the lowest number of poor HHs of all models that go into this comparison. In other words, if we take more models into the comparison the overlap across all of these models is lower than the overlap between any model and GTZ Kampot on its own. Each model has HHs that it identifies as poor that are not identified as such by the other models. And each model has HHs that it identifies as non-poor while the other models identify them as poor.

A second comparative perspective is through the similarity indicator. The limitation of this indicator is that it takes the output of one particular model as its base – above the output of the Kampot MVFL model - and then assesses the similarity of other models to the base model. Thus, the indicator always takes a particular model as its benchmark and it does not have a "neutral" benchmark with which all models can be compared.

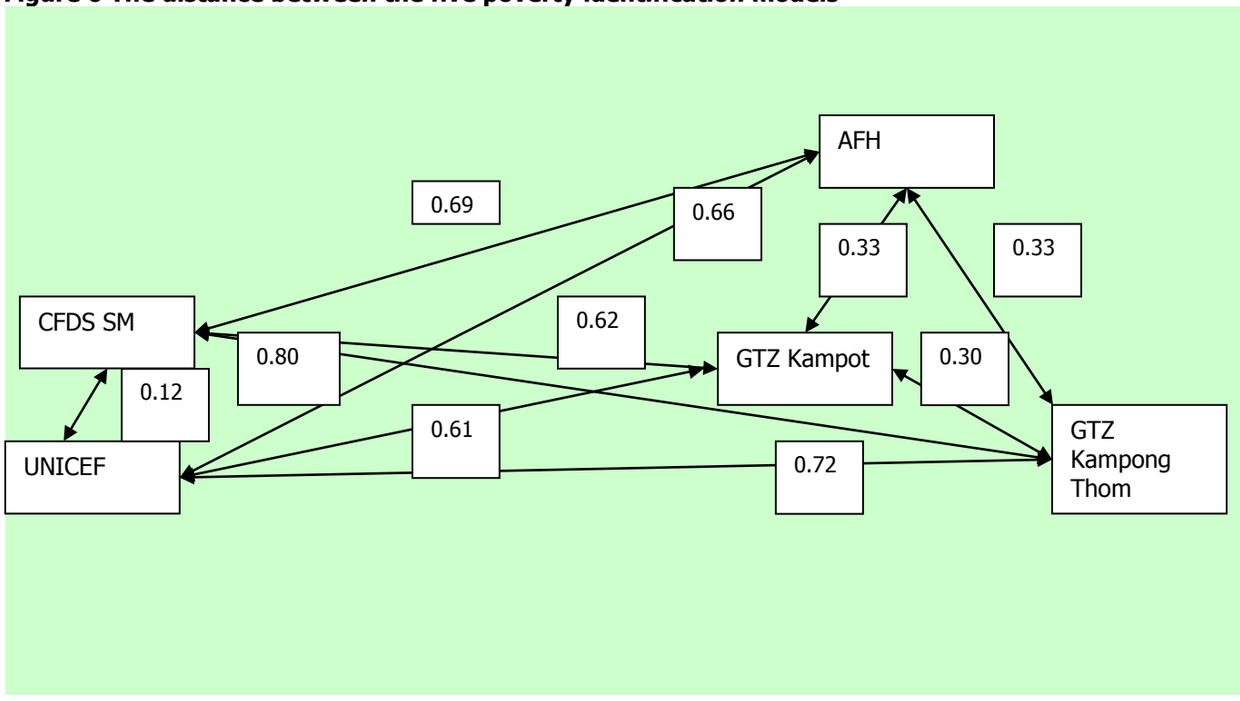
However, each comparison between two models can be looked at from the perspective of either model, and a comparison across all models of the averages of these perspectives (similarity indicators) is a reasonable approximation of their similarity as it would look like in a "neutral" comparison space. Table I in annex 13 gives the similarity indicators for all possible comparisons as well as the averages across the two indicators for each particular comparison. Figure 6 below represents the similarity – or rather the dissimilarity or "distance"[30] - between the five models compared. There are two clusters of models:

- GTZ Kampot, GTZ Kampong Thom & AFH
- UNICEF Svay Rieng & CFDS Sompou Meas

The two models of the second cluster are most like each other.

[30] The distance between the models – indicated by the figure between 0 and 1 between each two models, is (1- averaged similarity indicator) for these two models.

Figure 6 The distance between the five poverty identification models



Distance between two models = (1-averaged similarity indicators) for the two models

Summary of main results regarding comparison across all models

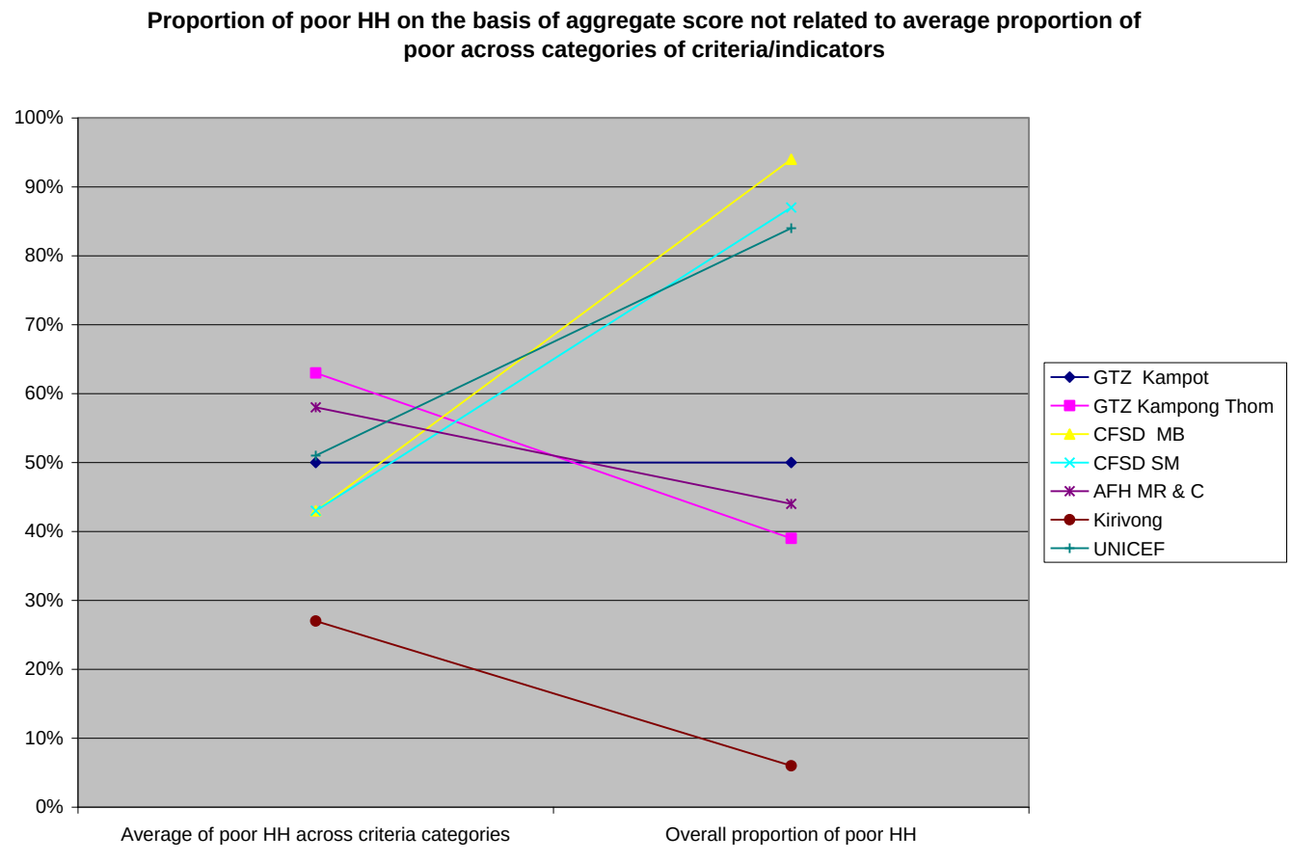
- If we exclude those models from the comparison that identify nearly none or nearly all HHs as poor, i.e. if we exclude the CFDS Monkul Borey and Kirivong models, 27% of all HHs surveyed in Kampot are identified as being poor HH by ALL models.
- In terms of overall similarity, there are two clusters of models:
  - GTZ Kampot, GTZ Kampong Thom & AFH
  - UNICEF Svay Rieng & CFDS Sompou Meas
- The two models of the second cluster are more like each other than the three models of the first cluster.

5.5 What makes for the differences between the various poverty identification models

The poverty identification models compared vary greatly, in their design (5.1) and in their output (5.2 & 5.3). Does our study allow for conclusions regarding possible relationships between design elements and output?

As Table G in annex 13 shows: the overall proportions of poor identified by the various models are not in any obvious way related to the proportions of poor identified by the various criteria that go into the aggregate score. A quick and dirty shortcut to show the absence of such a relationship is to compare the *average* proportion of poor *across categories* with the *overall* proportion of poor identified through the *aggregate* score: figure 7 below:

Figure 7



For three models the average is lower than the overall proportion, for three models it is higher. For the Kampot MVFL model the two are equal. In other words, some models identify relatively high proportions of poor for each of the criteria that go into their aggregate score but their aggregate score itself identifies a relatively smaller proportions of poor, while other models identify relatively low proportions of poor for each criterion but result in relatively high overall proportions of poor.

Main result regarding the relationship between poverty identification model design and output

- So many different components go into the poverty identification models which we have compared that it becomes impossible to determine what makes for their output. However, what makes the models fundamentally incomparable is that they differ in the definitions of their criteria. What it means to be poorly housed, or to be poor in terms of particular assets (animals, means of transportation, media equipment, etc.), or to have a disadvantaged HH composition, etc. etc. is different across models.

6. Conclusions and recommendations

In line with the objectives of the study draws some conclusions and suggestions about the GTZ Kampot MVFL process and outcome and about poverty identification schemes in general.

- ❑ Conclusions are bullet-pointed
- ❑ Suggestions are numbered

The process of updating the Most Vulnerable Families Lists

- Repeating bears fruit. Villagers understand and accept the MVFL process more than before.
- Integration with the CIP process has obvious prospects for ensuring the continuing availability of resources after outside support is withdrawn.

1 The experience of this update shows that one needs to allow for sufficient time to ensure proper implementation of the MVFL process, especially for drafting the first MVFL[31].

2 However, reaping the fruits requires some more repeats. For the integration with the CIP process to reach a level that is sufficient to make MVFL a standard component of the CIP process, with an accompanying allocation of financial and other resources, at least one or two more years of outside facilitation appear to be necessary. The repeats should pay explicit attention to the following aspects:

2A Real ownership needs more capacity building. The ToT approach has limitations. Those only indirectly trained have much less grasp of the process than those directly instructed by DFCT members and GTZ staff. Sometime below the minimum level required for productive participation.

2B Procedural requirements seems to have been under-resourced. Basics like having copies of the lists and the HH scores at the various administrative levels involved (village, commune, district) and storing these for future reference were not fulfilled everywhere. Further awareness-raising regarding the NEED for this (transparency, accountability) is necessary.

- The process is participatory but limited to the 'professional' elite (and thus male dominated).

[31] I.e. through appropriate information gathering, discussion, and assessment in terms of criteria by a VWG of which a variety of members is actively participating in its proceedings.

3 The dominance by the 'professional' elite is what is to be expected. It is also very probable that broadening 'real' community participation is going to be difficult. Given involvement in another couple of repeats, GTZ may nevertheless consider exploring some alternative modalities of facilitating the constitution of VWGs to see if participation, including that of women, can be increased.

- Some villages are poorer than others but these differences are NOT proportionately reflected in the number of HHs on the MVFL. This implies (implicit) ceilings on the number of families on the list, which is especially problematic for the poorest villages, evidenced by disproportionate numbers of false exclusions.

- Criteria remain a real issue. VWG 'work their way around' the inherent difficulties, but the comparability is necessarily compromised by these local 'adaptations' (specific definitions of inherently 'vague' criteria and/or taking additional criteria into account).

4 There is a real argument for keeping criteria vague: for both validity reasons (local understanding and assessment is in principle seen as more accurate than assessment on the basis of abstract general criteria) and for reasons of ownership of the identification process and outcome, the GTZ Kampot criteria allow for considerable interpretative freedom. On the other hand, the process to define the criteria is turns out to be a considerable struggle for VWGs, especially the housing and income criteria generated a lot of debate. We suggest to aim for more concretely defined criteria. This will ensure better comparability and lessen the interpretative burden on VWGs (given proper training). We believe that neither validity nor ownership has to be compromised by more concrete definitions. As the concreteness of the criteria is an issue for all poverty identification schemes/models the suggestions how to safeguard both are described in the section below about poverty identification schemes in general.

The outcome of the MVFL process in Kampot

- The MVFL procedure is quite accurate regarding the *identification* of MVF. The overall poverty status is quite well reflected in the number of HHs on the MVFL. Accuracy is best indicated by expressing false inclusions (HHs on the lists that should not have been on it) and false exclusions (HHs not on the list who should have been on it) as percentages of the total of correctly listed and non-listed HHs: for these five villages[32], the current MVFL include 7% non-eligible HHs while at the same time leaving out 11% eligible HHs.
- A major determinant of false inclusions and negatives, in other words of inaccuracy, are the (implicit cap) on the number of HHs that can be on the list (see above).
- The MVFL procedure is NOT very accurate in differentiating between extremely and very poor families. The VWG tend to either include or exclude families and when they include them assign 'extreme' scores on most indicators. A probable reason for this is that criteria scores are used to legitimate the listed status of the HHs on the MVFL.

5 The inaccuracy regarding the differentiation between sub-categories of poor shows what interpretative freedom results in. We believe that to the extent that criteria are more concretely defined AND VWG members are better trained, using criteria to differentiate is feasible.

[32] As a reminder: we do not claim these figures are statistically representative for the MVFL process in Kampot province.

Comparing poverty identification models

- The various poverty identification models that we compared differ in so many **design** aspects that it is impossible to really compare them beyond a basic 'output' comparison.
- In terms of **output** comparison:
    - The proportion of poor amongst the 508 HHs surveyed in Kampot identified by the various models varies greatly (from 6% to 94%).
    - The overlap between the various models and the Kampot MVFL model in terms of individual HHs identified as poor or non-poor also varies greatly (from 11% to 100%).
    - If we limit the comparison to those models that do not identify nearly none or nearly all HHs as poor, i.e. if we exclude the CFDS Monkul Borey and Kirivong models, 27% of all HHs surveyed in Kampot are identified as being poor HHs by ALL models.
    - terms of overall similarity, there are two clusters of models. The two models of the second cluster are most like each other, but none of the other comparisons shows great similarity:
        - GTZ Kampot, GTZ Kampong Thom & AFH
        - UNICEF Svay Rieng & CFDS Sompou Meas
- So many different components go into the poverty identification models which we have compared that it becomes impossible to determine the **relationship** between poverty identification model **design and output**.

6 What makes the models fundamentally incomparable is that they differ in the definitions of their criteria. What it means to be poorly housed, or to be poor in terms of particular assets (animals, means of transportation, media equipment, etc.), or to have a disadvantaged HH composition, etc. etc. is very different across models. There are as it were two levels of vagueness in the definition of criteria. There is a certain measure of agreement across models that particular KINDS of criteria (animals, incl. poultry, assets, incl. residential land, traction animals, debts, and housing), but within each kind, different models make different choices for more SPECIFIC aspects (level 1) and these aspects are then described in such a non-specific way that those doing the assessment still have considerable interpretative freedom (level 2). Thus, when implementing the various models in our database we regularly had to make somewhat arbitrary assumptions to operationalize very vaguely described criteria in terms of concrete variables (see annexes 4 and 8). In fact, for most if not all models, the word "model" suggests too much specificity. Similar to the Kampot MVFL model, the lists of criteria are normally conceptualized as a "guideline", a "check", a "decision-making aid" or something procedurally similar. They are meant to somewhat objectify local understandings but certainly not replace them.

In the introduction to the section on comparing poverty identification models we assumed that if the outputs of the various models are very dissimilar, we are sure to have reason for worry because this signifies that at least some of the models are not doing a good job, irrespective of which HHs are "really" poor. Is this indeed what we can now conclude? Paradoxically we have to say: probably not. The results of our analysis show that when the criteria are operationalized *before* they are being applied to actual HHs, the proportions of poor HHs identified by particular models varies enormously. The question now is, does this mean that the some models use the wrong criteria or does it mean that that operationalization *during* application to HHs allows assessors such freedom that the criteria become de facto a post hoc legitimization rather than an objective tool facilitating poverty identification. The analysis of the way VWGs in Kampot seem to use the criteria suggests the latter and we have no reason to believe that this is exceptional. In other words, the dissimilarity cannot be construed as a basis for worry that some models are not doing a good job.

At the same time there is continuous debate about the best criteria, and there is a national level effort to harmonize criteria. What does the above mean for this debate and effort? We suggest the following:

6A Comparability is impossible without agreement on a particular number of precisely defined criteria. Harmonization cannot be achieved without agreeing upon a common set of such criteria. Equally, comparability assumes agreement on a break-off point for the aggregate score based on these criteria. To the extent that one supports the principle that like should be treated like, irrespective of the location one happens to live, comparability of poverty identification is a worthwhile objective and the above has to be accepted as unavoidable.

6B The selection of a basic list of specific criteria, associated weights, and break-off points in the aggregate score to differentiate between poverty levels should at least be based on statistical analysis of recent national level datasets like the Cambodia Socio-Economic household Survey. However, we would strongly advocate a process approach to the choices made: the first list of specific criteria, associated weights, and break-off points should be considered a starting point, to be adapted in a continuous learning process that includes the use of this common set of criteria in many different locations, further factor analytic and/or consumption regression studies on national level datasets, more in-depth village level studies of stratification and (fuzzy-set) comparative analyses (see annex 7 for background). This would imply that the working group on harmonization does not consider the job done when a first agreement is reached but continuous as a platform for learning and exchange.

6C The arguments for honoring local understanding and aiming for local ownership are equally valid. A way to both realize harmonization AND ensure room for local understanding and facilitate ownership is to allow for additions to the basic set of criteria. As long as implementers of poverty identification schemes can be persuaded to document the identification process in such a way that the HH scores for each criterion are kept on record this record can be used to both calculate a nationally comparable poverty profile and a local poverty profile including specific local understandings and ensuring local ownership. In fact, to the extent that the added criteria are well-defined, such procedure would result in interesting area-specific datasets that can be evaluated by the harmonization working group (see 7B).

Selected references

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Annexes

1. CAS proposal for the MVFL assessment Kampot (GTZ/RDP)
2. The Identification process
3. Questionnaire & basic tabulations of total survey sample
4. Poverty indicators: Village Working Group criteria and CAS variables
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6. Income situation
7. Overview of poverty classes/levels as commonly described in the literature
8. Overview of poverty identification schemes, criteria, weights
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Annex I
CAS proposal for the MVFL assessment Kampot (GTZ/RDP)

Introduction
The current MVFL in Kampot are based on a process that required each commune to select the poorest 10% of HH of their commune. They used and sometimes adapted provincial criteria as guidelines but the primary objective was not to assess HH against general criteria but to select the poorest 10% of their own community (so as to grant them exemption of financial contributions to local development projects.

Now these lists are being considered as the basis for more extensive benefits in terms of free/subsidized access to provincial service delivery in the health and other sectors. This implies that the SES of the HH on the MVFL should be comparable across communes, so that a family qualifies for these benefits (or not) on the basis of a poverty assessment that is not too much biased by the SES of the other families in the same commune.

On average, using national poverty criteria, 35-40% of HH in Kampot can be expected to qualify as poor. Experience (UNICEF) suggests that MVFL that entitle those on the list to service delivery waivers/subsidies might comprise 25% of all HH in a commune on average. This implies that the MVFL after the June/July update will be considerably bigger.

In order to select those 25% GTZ intends to design a set of criteria, taking the those used in Kampong Thom as the basis but probably adding some more. The set of criteria to be used in the update will be discussed in a Kampong Thom-Kampot meeting on 5-5-2005.

However, as yet it is not clear what level of poverty should qualify for service delivery benefits. When one leaves the 'clarity' of the 'poorest of the poor' level of poverty, where to draw the line?[33] The objective of enlarging the number of qualifying HH is to avoid costs of basic services constituting poverty traps for poor families. But how much 'buffer' is sufficient? Again, identifying the better-off families, that certainly should not qualify is probably not much of a problem. But establishing a fair, consensual break-off point is very much a problem.

It is very well possible that the most useable MVFL would be a list of poor HH of which a set of basic demographic and socio-economic data are available. Given a particular objective, this information could then be used to identify the beneficiaries. Again, also for this one would need to agree upon a proper, feasible procedure to establish the average proportion of HH that should be on such a 'master' MVFL.

The major objectives of this assessment are:

1. Is the updating process executed as intended?
2. An independent thorough check on the number of false inclusions on the updated MVFL list in a selected number of villages (how many of the families on the list should not be on that list)
3. An independent thorough check on the number of false exclusions on the updated MVFL list in a selected number of villages (how many of the families not on the list should actually be on that list)
4. Assessing a possible relationship between the extent to which intended updating procedure is followed and the quality (i.e. number of false inclusions and negatives) of the resulting lists.
5. Test the use of a more elaborate set of criteria/key data on individual HH; provide GTZ with a dataset of raw information potentially relevant for assessing SES from various sectoral perspectives (health, education, agriculture, land, water supply,…)

[33] For this level 10% of the population is probably a fair estimate – although using across-commune criteria might result in a different distribution of proportions of poorest of the poor HH across communes.

Check on the updating process
The Observation is going to take place in two phases; the first phase will consist of observation of updating the MVFL by Village Working Groups (week 26). The second phase is going to consist of observation of the verification of the updated lists by the Commune card establishment teams. The Observation phase is dependent upon decisions being taken about the process very closer to the actual implementation.

Check on the updating outcome
The assumption is that we sample five average size villages, one in each district, and sample the 50% poorest families. Such a large sample guarantees that we include all current MVFL HH and those that are going to be on any updated list whatever the decisions taken regarding break-off points. For these five villages we will then have information that allows for analysis about how those on the list compare with those not on the list and deliver a database that enables GTZ to see how various possible decisions regarding criteria & break-off points work out in comparison with the actual MVFL. This provides both for the required check (false inclusions/negatives) and input for the ongoing discussions regarding the use of the MVFL for service delivery waivers.

Budget
The attached budget & time schedule is based on the following assumptions:

Check on the updating process
CAS has a team of 2 researchers in the field for 20 days. The number of villages in which the updating process is being observed is going to depend upon the exact nature of this process (the five that we are going to do the list check are to be included for sure). The choice of villages is going to be informed by GTZ expectations regarding the quality of the updating process. Of the five villages of which the lists are going to be checked by HH interviews later on we suggest to select three that are expected to follow an updating process that is in line with the procedure as intended and two of which it is expected that the procedure will not be followed.

The observation phase is impossible to plan in detail in advance as it has to respond in a flexible and pragmatic manner to the actual updating process. The budget is therefore a tentative budget and must be interpreted as a ceiling for available research time and other costs. In case the actual costs are lower than the budget estimates – as to be proven by receipts – only actual costs are going to be reimbursed by GTZ.

Check on the updated lists
1. CAS does interviews[34] in 5 districts, 1 communes per district, one village per commune, total 5 villages.
2. An interview takes 30 minutes.
3. On average we do 100 interviews per village.

[34] In addition to the check using the criteria we propose to add the check of asking all interviewed families which families on the MVFL do not qualify and which families not on the list should have been on.

The thoughts underlying these assumptions are;

1. Average village size = 200 HH; average number of HH on MVFL = 25% = 50 HH
2. We want a thorough check of false inclusions, a good indication of false exclusions.
3. With 50 HH on the MVFL we might as well go for a complete check for the false inclusions: 50HH
4. If we go for equal sample size this implies interviewing a sample of 50HH of the remaining 150 HH.
5. We expect that across a set of villages a team of 6 researchers can average 6 30 minute interviews/interviewer/day when factoring in the time required to look for/wait for respondents and the time required to identify the HH to be visited (see above)

The time schedule is only for the survey.

Annex 2 The identification process

The MVFL has first been established in 2003. The 2005 update (2nd update) uses slightly altered criteria to increase uniformity throughout the province, and for the first time differentiates between a category of *extremely poor* and one of *very poor* HH.

The list is established under tge leadership of the Commune Councils (CC), direct implementation is through Village Working Groups (VWG), and both are supported by the District Facilitation Team (DFT), the District Community Development Team (DCDT) and the Provincial Community Development Team (PCDT) in cooperation with GTZ technical assistance.

Implementing process[35]

1. Meeting at Commune level

Organized by DFT/DCDT for CC, PBC, and chief/members of CBO's to discuss and agree on criteria and procedure.

2. Establishment of VWG

VWG is responsible for drafting the MVFL, displaying it in the village, deal with complaints, revising it, forwarding the corrected draft to the CC and displaying the final version after CC endorsement. If village has a VDC, this committee will be the VWG, if there is no VDC a group of at least 7 members will be established.

3. Drafting the MVFL

The basis for the update is the list of last year. Listed families are given a score based on 7 poverty criteria (see annex poverty indicators)**.**

4. First display n village information board

Display for at least a week.

5. Villagers' meeting for agreement

CC facilitator will:

- Request endorsement of VWG members. If this is given, the MVFL will be read out and villagers can comment, complain, etc.
- If VWG members are not endorsed, the meeting is used to elect (a new) VWG who will call for another meeting to discuss the draft list.

6. Second display of the draft MVFL

The corrected list (after the meeting) will be displayed for at least a week. This allows for family visits of the families that are suggested for deletion/inclusion. The adjusted draft is then displayed for another week. Now only complaints in writing are admitted (to the CC).

7. Acknowledgement of the MVFL by CC

After the deadline the CC facilitates a meeting of VWGs and suggests final solutions. Then acknowledges the result.

8. Establishment of Commune Working Group for MVF ID card that gives priority access to services

Established during second display period. Visit families at home for in-depth assessment and photographing. If family does not meet criteria, CWG reports to CC. CC discusses again with VWG.

[35] GTZ et al. (June 2005)

Annex 3 Questionnaire and basic tabulations of the whole dataset

Assessment of MVF list CRITERIA & IDENTIFICATION RESULTS in Kampot Province

Household Survey

IDENTIFICATION

1	SERIAL NUMBER:	
2	Name of Head of Household	
3	Name of District (Srok/Khan)	
4	Name of Commune (Khum Sangkat)	
5	Name of Village (Phoum)	
6	Household number	

INTERVIEWER'S VISITS AND RESULT

Interviewer's name:	Interview date:
Field Supervisor's Name: Data entry by:	**Day/Month/Year:**_____ **Total number of visits**____

INTRODUCTION:

I would like to ask you some questions about your livelihood and concerns. I work for the Center for Advanced Study, an NGO research center, which is not part of the government and not working for it. Your answer will be confidential; no one will find out what you say. There are no right and no wrong answers; we just want to find out your opinion, so you can say whatever you like.

Instruction for researchers:

1. Do the interview as a conversation. Ask question with gentle, careful and with soft tone. Do not ask as interrogation or intimidation.
2. Give sufficient time to respondent to think and answer to the questions.
3. If the respondent does not understand the question, please, ask whether he/she wants it to be repeated.

Regarding choice of respondent

In principle, the respondent should be the head of the household or his wife. In case neither is available, but another adult member is this other household member can replace the head of household IF AND ONLY IF SHE OR HE is knowledgeable about all household matters, including household income and expenditure. If this is not the case: ARRANGE ANOTHER VISIT.

Household information

Line No.	Relationship to household head	Sex M=1 F=2	Age in completed years (*Less than 1 year code 00*)	Marital status	Is Line number currently in school? Yes=1 No=2	Highest level of Education for Head of HH	Can read and write *FOR LESS THAN 6 YEAR OLD Code=96* Yes=1 No=2	Daily Work Yes=1 No=2	Daily Riel	Chronic disease Yes=1 No=2	Handicap Yes=1 No=2	**Eligibility status** Circle line number of Interviewed person (aged 18 to 60)
(01)	(02)	(03)	(04)	(05)	(06)	(07)	(08)	(09)	(10)	(11)	(12)	(13)
01												**01**
02												**02**
03												**03**
04												**04**
05												**05**
06												**06**
07												**07**
08												**08**
09												**09**
10												**10**
11												**11**
12												**12**
13												**13**
14												**14**
TOTAL												

NOTES FOR RESEARCHER

Daily Work: Note anyone currently contributing to HH income – be the job permanent, temporary or seasonal – and irrespective of the work generating cash income or produce for family consumption or selling
Daily Riel: Only note down cash income earned. Other Income is the subject matter of the questions under A below.

Chronic Disease: Is the disease which has been present for a long time and which seems to subside but then always comes back again. This disease makes it very difficult or impossible for someone to find a job, or even to earn a living;

Examples of Chronic diseases:
1. HIV/AIDS
2. TB
3. Diabetes
4. Hypertension
5. Kidney disease
6. Heart disease
7. Mental disease
8. Paralysis
9. Other

Examples which are not chronic diseases:
1. Head ache which occurs some times
2. Stomach pain
3. Some skin problems
4. Diarrhea
5. Common old people's health problems such as:
   - Difficulty to walk
   - Deafness
   - Eye sight problems
6. Other

Codes for Q. 02	**Codes for Q.05**	**Codes for Q.07**
Head=1 Wife or husband=2 Son or daughter=3 Son-in-law or daughter-in-law=4 Grandchildren=5 Parents=6 Parents-in-law=7 Brother/sister=8 Brother-in-law/sister-in-law=9 Nephew/niece=10 Other relatives=11 Adopted child/foster child=12 Do not know=97	Currently married=1 Separated=2 Widowed=3 Divorced=4 Never married=5	Primary = 1 Secondary = 2 Higher = 3 None = 4

Household members (Relationship to household head) by Village (Phum)

		Name of Village (Phum)					
		Damnak Kralanh Lech	**Krasang Meanchey**	**Prey Pi**	**Thmei**	**Trapeang Thom**	**Total**
Relationship to household head	Head	100	101	105	100	102	508
	Wife or husband	73	76	75	71	76	371
	Son or daughter	255	267	293	162	318	1295
	Son-in-law or daughter-in-law	7	1	9	5	14	36
	Grandchildren	21	19	28	25	36	129
	Parents	4	0	4	2	2	12
	Parents-in-law	2	4	1	2	3	12
	Brother/sister	0	0	3	2	1	6
	Brother-in-law/sister-in-law	0	3	2	1	1	7
	Nephew/niece	2	2	4	1	0	9
	Other relative	2	0	0	1	0	3
	Adopted child/foster child	0	1	0	0	0	1
Total		466	474	524	372	553	2389

Number of people in HH

Village Code	**Mean**	**N**	Std. Deviation
Trapeang Thom	5.34	102	2.104
Prey Pi	5.00	105	2.193
Krasang Meanchey	4.69	101	2.448
Thmei	3.66	100	1.730
Damnak Kralanh	4.60	100	2.256
Total	4.67	508	2.224

Statistics for the average number of people in the HH

			Statistic	Std. Error
Number of people in HH	Mean		4.67	.099
	95% Confidence Interval for Mean	Lower Bound	4.47	
		Upper Bound	4.86	
	5% Trimmed Mean		4.56	
	Median		4.00	
	Std. Deviation		2.224	
	Minimum		1	
	Maximum		14	

Household Head Marital status by village

			Sex		
		Marital status	**Male**	**Female**	**Total**
Village Code	**Trapeang Thom**	Currently married	71	5	76
		Separated	0	1	1
		Widowed	3	21	24
		Never married		1	1
	Prey Pi	Currently married	70	4	74
		Separated	0	4	4
		Widowed	1	22	23
		Divorced		4	4
	Krasang Meanchey	Currently married	66	11	77
		Widowed	2	17	19
		Divorced		5	5
	Thmei	Currently married	51	18	69
		Separated	1	0	1
		Widowed	0	24	24
		Divorced		5	5
		Never married		1	1
	Damnak Kralanh	Currently married	70	3	73
		Separated	2	2	4
		Widowed	3	16	19
		Divorced		4	4
Total		Currently married	328	41	369
		Separated	3	7	10
		Widowed	9	100	109
		Divorced		18	18
		Never married		2	2

Female/Male headed HH by village

		Sex		
		Male	**Female**	**Total**
Village Code	**Trapeang Thom**	74	28	102
	Prey Pi	71	34	105
	Krasang Meanchey	68	33	101
	Thmei	52	48	100
	Damnak Kralanh	75	25	100
Total		340	168	508

Is line number currently in school? by age category by village

Is line number currently in school?			Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	Total
Yes	age categories	5-9	24	26	24	10	20	104
		10-14	90	79	60	36	69	334
		15-19	20	31	27	16	41	135
		20-24	1	4	1	4	7	17
		40-44	0	0	0	0	0	0
		45-49	0	0	0	0	0	0
		65+	0	0	0	0	0	0
Total			135	140	112	67	137	590
No	age categories	0-4	48	64	59	39	47	257
		5-9	52	59	57	32	31	231
		10-14	14	6	11	12	4	47
		15-19	52	31	36	20	20	159
		20-24	50	50	49	47	35	231
		25-29	29	31	32	34	34	160
		30-34	25	24	20	21	29	119
		35-39	36	27	33	11	31	138
		40-44	31	21	25	17	21	115
		45-49	21	20	8	10	17	76
		50-54	15	7	8	20	17	67
		55-59	15	13	8	10	11	57
		60-64	11	6	3	7	14	41
		65+	19	25	13	25	19	101
Total			418	384	362	305	329	1799

Is line number currently in school? by age category by Sex

Sex			Is line number currently in school?		Total
			Yes	No	
Male	age categories	0-14	224	286	510
		15-64	89	513	602
		65+	0	34	34
	Total		313	833	1146
Female	age categories	0-14	214	249	463
		15-64	65	648	713
		65+	0	67	67
	Total		279	964	1243

Can read and write by age category by village

Can read and write			Village Code					
			Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	Total
Yes	age categories	5-9	11	7	7	2	8	35
		10-14	77	55	34	29	55	250
		15-19	53	52	57	26	59	247
		20-24	43	34	28	34	39	178
		25-29	20	13	10	14	25	82
		30-34	18	12	4	7	24	65
		35-39	25	8	11	3	19	66
		40-44	14	8	11	10	7	50
		45-49	9	12	4	5	9	39
		50-54	7	6	5	13	13	44
		55-59	10	7	3	4	8	32
		60-64	5	4	0	2	11	22
		65+	3	8	1	4	4	20
	Total		295	226	175	153	281	1130
No	age categories	5-9	52	60	58	33	35	238
		10-14	27	30	37	19	18	131
		15-19	19	10	6	10	2	47
		20-24	8	20	22	17	3	70
		25-29	9	18	22	20	9	78
		30-34	7	12	16	14	5	54
		35-39	11	19	22	8	12	72
		40-44	17	13	14	7	14	65
		45-49	12	8	4	5	8	37
		50-54	8	1	3	7	4	23
		55-59	5	6	5	6	3	25
		60-64	6	2	3	5	3	19
		65+	16	17	12	22	14	81
	Total		197	216	224	173	130	940
for less than 6 year old	age categories 5 yrs	0-4	48	64	59	39	47	257
		5-9	13	18	16	7	8	62
	Total		61	82	75	46	55	319

Can read and write by age category by Sex

Sex			Can read and write			
			Yes	No	for less than 6 year old	Total
Male	age categories	0-14	142	192	176	510
		15-64	421	181	0	602
		65+	18	16	0	34
	Total		581	389	176	1146
Female	age categories	0-14	143	177	143	463
		15-64	404	309	0	713
		65+	2	65	0	67
	Total		549	551	143	1243

Highest level of Education for Head of HH by village

		Highest level of Education for Head of HH			
		Primary	Secondary	None	Total
Village Code	**Trapeang Thom**	57	11	34	102
	Prey Pi	55	6	44	105
	Krasang Meanchey	66	4	31	101
	Thmei	53	11	36	100
	Damnak Kralanh	60	21	19	100
Total		291	53	164	508

Highest level of Education for Head of HH by sex by village

Sex			Highest level of Education for Head of HH			
			Primary	**Secondary**	**None**	**Total**
Male	Village Code	**Trapeang Thom**	47	10	17	74
		Prey Pi	35	6	30	71
		Krasang Meanchey	43	4	21	68
		Thmei	26	9	17	52
		Damnak Kralanh	48	20	7	75
	Total		199	49	92	340
Female	Village Code	**Trapeang Thom**	10	1	17	28
		Prey Pi	20	0	14	34
		Krasang Meanchey	23	0	10	33
		Thmei	27	2	19	48
		Damnak Kralanh	12	1	12	25
	Total		92	4	72	168

Daily work by village by age categories by sex

Sex	age categories			Village Code					Total
				Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	
Male	0-14	Daily work	Yes	12	20	8	7	10	57
			No	97	116	85	65	90	453
		Total		109	136	93	72	100	510
	15-64	Daily work	Yes	129	98	109	85	120	541
			No	21	13	11	6	10	61
		Total		150	111	120	91	130	602
	65+	Daily work	Yes	3	7	2	8	2	22
			No	2	2	1	3	4	12
		Total		5	9	3	11	6	34
Female	0-14	Daily work	Yes	9	14	13	7	11	54
			No	110	84	105	50	60	409
		Total		119	98	118	57	71	463
	15-64	Daily work	Yes	125	137	111	117	142	632
			No	31	17	19	9	5	81
		Total		156	154	130	126	147	713
	65+	Daily work	Yes	9	9	6	9	6	39
			No	5	7	4	6	6	28
		Total		14	16	10	15	12	67

Daily work by village

		Daily work		
		Yes	No	Total
Village Code	Trapeang Thom	287	266	553
	Prey Pi	285	239	524
	Krasang Meanchey	249	225	474
	Thmei	233	139	372
	Damnak Kralanh	291	175	466
Total		1345	1044	2389

Statistics Daily income for all HH members that earn

	Village Code			Statistic	Std. Error
Daily Riel in 10000	**Trapeang Thom** (N=184)	**Mean**		**.3742**	.01810
		95% Confidence Interval for Mean	Lower Bound	.3385	
			Upper Bound	.4100	
		5% Trimmed Mean		**.3506**	
		Median		.3000	
		Std. Deviation		.24554	
		Minimum		.01	
		Maximum		2.00	
	Prey Pi (N=96)	**Mean**		**.2527**	.01750
		95% Confidence Interval for Mean	Lower Bound	.2180	
			Upper Bound	.2875	
		5% Trimmed Mean		**.2416**	
		Median		.2000	
		Std. Deviation		.17148	
		Minimum		.03	
		Maximum		1.00	
	Krasang Meanchey (N=104)	**Mean**		**.1623**	.01180
		95% Confidence Interval for Mean	Lower Bound	.1389	
			Upper Bound	.1857	
		5% Trimmed Mean		**.1538**	
		Median		.1500	
		Std. Deviation		.12029	
		Minimum		.01	
		Maximum		.70	
	Thmei (N=123)	**Mean**		**.2415**	.02611
		95% Confidence Interval for Mean	Lower Bound	.1898	
			Upper Bound	.2932	
		5% Trimmed Mean		**.1998**	
		Median		.2000	
		Std. Deviation		.28961	
		Minimum		.02	
		Maximum		2.00	
	Damnak Kralanh (N=73)	**Mean**		**.3964**	.03667
		95% Confidence Interval for Mean	Lower Bound	.3233	
			Upper Bound	.4695	
		5% Trimmed Mean		**.3706**	
		Median		.3000	
		Std. Deviation		.31328	
		Minimum		.03	
		Maximum		1.50	

Chronic disease by village

		Chronic disease		
		Yes	**No**	**Total**
Village Code	**Trapeang Thom**	15	538	553
	Prey Pi	17	507	524
	Krasang Meanchey	9	465	474
	Thmei	27	345	372
	Damnak Kralanh	22	444	466
Total		90	2299	2389

Handicap by village

		Handicap		
		Yes	**No**	**Total**
Village Code	**Trapeang Thom**	2	551	553
	Prey Pi	5	519	524
	Krasang Meanchey	11	463	474
	Thmei	17	355	372
	Damnak Kralanh	8	458	466
Total		43	2346	2389

OTHER HOUSEHOLD INFORMATION

A. Non-cash Income: Common property resources gathering and home produce for family consumption & selling

We are now going to ask you about the crops your household produced, animals you raised, NTFP that you collected and non-commercial fishing

(1) How much did you collect during the last twelve months?
(2) What is the value of that
(3) How much costs did you have to make to produce this
(4) IN THE OFFICE: calculate the Net value

Items description	From where	Yearly amount	Monetary value	Input costs	Net value (OFFICE)
1. Vegetable/fruits	Forest				
2. Wild life	Forest				
3. House construction material	Forest				
4. Resin	Forest				
5. Rice	Home				
6. Maize, beans or other crops	Home				
7. Vegetable/fruits	Home				
8. Chicken/duck (ONLY IF CONSUMED OR SOLD)	Home				
9. Pig/cow (ONLY IF CONSUMED OR SOLD)	Home				
10. Fish	Sea/River/ lake				
11. Rattan/Bamboo/Fire wood	Forest				
12. Others:(Specify)					
13. TOTAL NET VALUE (OFFICE)					

MONETARY VALUE TO BE ESTABLISHED PER VILLAGE BY SOME KEY INFORMANT INTERVIEWS

Notes for interviewer:
WHEN ASKING ABOUT YEARLY PRODUCTION: explicitly indicate that both dry and wet seasons are to be included

WHEN ASKING ABOUT PRODUCTION COSTS:

FOR ALL CROPS, draw attention to: seed(lings), manure, fertilizer, pesticides, fuel, hired labor or animals, irrigation charges, transportation of input; rentals paid (in kind)

FOR ANIMALS DRAW ATTENTION TO: feed, hired labor, veterinary services, transportation costs

Statistics Total Net Value in 10000 Riel by village

	Village code			Statistic	Std. Error
Total Net Value in 10000 Riel	**Trapeang Thom** (N=102)	**Mean**		**56.1277**	4.02723
		95% Confidence Interval for Mean	Lower Bound	48.1388	
			Upper Bound	64.1167	
		5% Trimmed Mean		**52.9357**	
		Median		42.3250	
		Std. Deviation		40.67306	
		Minimum		1.20	
		Maximum		173.00	
	Prey Pi (N=105)	**Mean**		**36.8813**	4.98775
		95% Confidence Interval for Mean	Lower Bound	26.9904	
			Upper Bound	46.7722	
		5% Trimmed Mean		**30.4434**	
		Median		21.8000	
		Std. Deviation		51.10923	
		Minimum		-20.50	
		Maximum		393.10	
	Krasang Meanchey (N=101)	**Mean**		**22.8554**	2.48124
		95% Confidence Interval for Mean	Lower Bound	17.9327	
			Upper Bound	27.7782	
		5% Trimmed Mean		**19.7123**	
		Median		16.1000	
		Std. Deviation		24.93619	
		Minimum		-7.50	
		Maximum		158.80	
	Thmei (N=100)	**Mean**		**32.7348**	2.84846
		95% Confidence Interval for Mean	Lower Bound	27.0828	
			Upper Bound	38.3868	
		5% Trimmed Mean		**29.7544**	
		Median		23.1750	
		Std. Deviation		28.48461	
		Minimum		1.50	
		Maximum		154.50	
	Damnak Kralanh (N=100)	**Mean**		**75.6833**	6.25615
		95% Confidence Interval for Mean	Lower Bound	63.2697	
			Upper Bound	88.0969	
		5% Trimmed Mean		**70.3060**	
		Median		56.7000	
		Std. Deviation		62.56154	
		Minimum		1.05	
		Maximum		286.36	

B. External Support

1	Does your HH receive any outside financial support, e.g. from family members living and working elsewhere?	1. Yes regularly
		2. Yes, sometimes
		3. Yes, once in a while
		4. No
2	If YES, please indicate how much in total per year	…….Riel

Note for Interviewer: if 1 or 2, ask for monthly and calculate yearly amount yourself

---

Does your HH receive any outside financial support, e.g. from family members living and working elsewhere? by village

		Does your HH receive any outside financial support, e.g. from family members living and working elsewhere?				
		Yes regularly	**Yes, sometimes**	**Yes, once in a while**	**No**	**Total**
Village code	**Trapeang Thom**	1	4	22	75	102
	Prey Pi	0	0	18	87	105
	Krasang Meanchey	0	1	24	76	101
	Thmei	0	2	20	78	100
	Damnak Kralanh	2	5	17	76	100
Total		3	12	101	392	508

Statistics for If YES, please indicate how much in total per year by village

	Village code			Statistic	Std. Error
If YES, please indicate how much in total per year	**Trapeang Thom** (N=27)	**Mean**		**17.4481**	5.99228
		95% Confidence Interval for Mean	Lower Bound	5.1308	
			Upper Bound	29.7655	
		5% Trimmed Mean		**12.9846**	
		Median		8.0000	
		Std. Deviation		31.13681	
		Minimum		.40	
		Maximum		120.00	
	Prey Pi (N=18)	**Mean**		**7.3444**	2.89901
		95% Confidence Interval for Mean	Lower Bound	1.2281	
			Upper Bound	13.4608	
		5% Trimmed Mean		**5.3549**	
		Median		2.5000	
		Std. Deviation		12.29946	
		Minimum		.50	
		Maximum		50.00	
	Krasang Meanchey (N=25)	**Mean**		**5.3160**	1.28644
		95% Confidence Interval for Mean	Lower Bound	2.6609	
			Upper Bound	7.9711	
		5% Trimmed Mean		**4.5989**	
		Median		2.0000	
		Std. Deviation		6.43219	
		Minimum		.30	
		Maximum		24.00	
	Thmei (N=22)	**Mean**		**4.8273**	1.21113
		95% Confidence Interval for Mean	Lower Bound	2.3086	
			Upper Bound	7.3460	
		5% Trimmed Mean		**4.2348**	
		Median		2.0000	
		Std. Deviation		5.68073	
		Minimum		.30	
		Maximum		20.00	
	Damnak Kralanh (N=24)	**Mean**		**24.2500**	9.40831
		95% Confidence Interval for Mean	Lower Bound	4.7874	
			Upper Bound	43.7126	
		5% Trimmed Mean		**16.9120**	
		Median		6.0000	
		Std. Deviation		46.09112	
		Minimum		.50	
		Maximum		192.00	

To be calculated in the office from HH info wages, Non-cash income & external support:

TOTAL MONTHLY HH INCOME……
TOTAL YEARLY HH INCOME……
TOTAL MONTHLY PER CAPITA INCOME……
TOTAL YEARLY PER CAPITA INCOME……

Statistics Total yearly HH income by village

	Village code			Statistic	Std. Error
Yearly HH income	**Trapeang Thom**	**Mean**		**314.8993**	19.99368
		95% Confidence Interval for Mean	Lower Bound	275.2372	
			Upper Bound	354.5614	
		5% Trimmed Mean		**298.4521**	
		Median		270.4250	
		Std. Deviation		201.92626	
		Minimum		1.45	
		Maximum		1263.00	
	Prey Pi	**Mean**		**119.6032**	14.71773
		95% Confidence Interval for Mean	Lower Bound	90.4174	
			Upper Bound	148.7890	
		5% Trimmed Mean		**97.1009**	
		Median		88.1500	
		Std. Deviation		150.81181	
		Minimum		-20.50	
		Maximum		939.48	
	Krasang Meanchey	**Mean**		**83.9812**	8.76451
		95% Confidence Interval for Mean	Lower Bound	66.5926	
			Upper Bound	101.3697	
		5% Trimmed Mean		**72.7151**	
		Median		67.3000	
		Std. Deviation		88.08227	
		Minimum		-7.50	
		Maximum		543.60	
	Thmei	**Mean**		**131.4288**	12.22371
		95% Confidence Interval for Mean	Lower Bound	107.1743	
			Upper Bound	155.6833	
		5% Trimmed Mean		**117.6703**	
		Median		97.3650	
		Std. Deviation		122.23711	
		Minimum		1.50	
		Maximum		723.00	
	Damnak Kralanh	**Mean**		**199.1513**	24.13202
		95% Confidence Interval for Mean	Lower Bound	151.2681	
			Upper Bound	247.0345	
		5% Trimmed Mean		**166.6090**	
		Median		117.8500	
		Std. Deviation		241.32023	
		Minimum		1.05	
		Maximum		1588.00	

Statistics **Yearly total per capita income by village**

	Village code			Statistic	Std. Error
Yearly per capita income	**Trapeang Thom**	**Mean**		**64.6717**	4.77426
		95% Confidence Interval for Mean	Lower Bound	55.2009	
			Upper Bound	74.1425	
		5% Trimmed Mean		**58.9693**	
		Median		54.7288	
		Std. Deviation		48.21764	
		Minimum		.29	
		Maximum		315.75	
	Prey Pi	**Mean**		**24.8489**	2.46534
		95% Confidence Interval for Mean	Lower Bound	19.9601	
			Upper Bound	29.7378	
		5% Trimmed Mean		**22.2252**	
		Median		17.2500	
		Std. Deviation		25.26217	
		Minimum		-5.13	
		Maximum		133.00	
	Krasang Meanchey	**Mean**		**19.2208**	1.71888
		95% Confidence Interval for Mean	Lower Bound	15.8105	
			Upper Bound	22.6310	
		5% Trimmed Mean		**17.5848**	
		Variance		298.411	
		Std. Deviation		17.27457	
		Minimum		-3.75	
		Maximum		87.58	
	Thmei	**Mean**		**36.9115**	3.25509
		95% Confidence Interval for Mean	Lower Bound	30.4527	
			Upper Bound	43.3703	
		5% Trimmed Mean		**33.0737**	
		Median		26.3333	
		Std. Deviation		32.55093	
		Minimum		.50	
		Maximum		183.73	
	Damnak Kralanh	**Mean**		**42.4954**	4.17728
		95% Confidence Interval for Mean	Lower Bound	34.2067	
			Upper Bound	50.7840	
		5% Trimmed Mean		**37.9000**	
		Median		25.5557	
		Std. Deviation		41.77283	
		Minimum		.26	
		Maximum		264.67	

C. Debts

1	How often does your HH borrow money?	1. Never (Continue with D)	
		2. Seldom	
		3. Often	
		4. Always	
2	If your HH currently has a debt, please tell us for each loan separately:	What is the currently outstanding amount in Riel? 3.1-3.3	What is the collateral for the loan? 4.1-4.3
2.1			
2.2			
2.3			

Codes for 4.1-4.3
No collateral=1
Residential land=2
Agricultural land=3
Other…..

How often does your HH borrow money? by village

		How often does your HH borrow money?				
		Never	**Seldom**	**Often**	**Always**	**Total**
Village code	**Trapeang Thom**	26	62	14	0	102
	Prey Pi	33	46	25	1	105
	Krasang Meanchey	22	56	22	1	101
	Thmei	35	44	21	0	100
	Damnak Kralanh	50	34	15	1	100
Total		166	242	97	3	508

Number of Households with outstanding loans by village

Village	Total HH	HH with outstanding loan	% of total
Trapeang Thom	102	70	69%
Prey Pi	105	69	66%
Krasang Meanchey	101	78	77%
Thmei	100	64	64%
Damnak Kralanh	100	47	47%
Total	**508**	**328**	**65%**

Statistics total outstanding loans by village

	Village code			Statistic	Std. Error
Outstanding loan total	**Trapeang Thom**	**Mean**		**28.1929**	2.75551
		95% Confidence Interval for Mean	Lower Bound	22.6958	
			Upper Bound	33.6900	
		5% Trimmed Mean		**25.5000**	
		Median		25.0000	
		Std. Deviation		23.05429	
		Minimum		3.70	
		Maximum		150.00	
	Prey Pi	**Mean**		**29.3043**	3.89578
		95% Confidence Interval for Mean	Lower Bound	21.5304	
			Upper Bound	37.0783	
		5% Trimmed Mean		**24.8486**	
		Median		20.0000	
		Std. Deviation		32.36081	
		Minimum		1.00	
		Maximum		170.00	
	Krasang Meanchey	**Mean**		**28.1705**	3.46015
		95% Confidence Interval for Mean	Lower Bound	21.2805	
			Upper Bound	35.0606	
		5% Trimmed Mean		**24.1268**	
		Median		20.0000	
		Std. Deviation		30.55925	
		Minimum		.50	
		Maximum		160.00	
	Thmei	**Mean**		**28.8859**	4.11660
		95% Confidence Interval for Mean	Lower Bound	20.6596	
			Upper Bound	37.1123	
		5% Trimmed Mean		**23.6354**	
		Median		20.0000	
		Std. Deviation		32.93281	
		Minimum		1.00	
		Maximum		200.00	
	Damnak Kralanh	**Mean**		**63.3723**	9.88186
		95% Confidence Interval for Mean	Lower Bound	43.4812	
			Upper Bound	83.2635	
		5% Trimmed Mean		**56.3416**	
		Median		40.0000	
		Std. Deviation		67.74661	
		Minimum		.50	
		Maximum		300.00	

The means are calculated for the HH that have outstanding loans only.

Collaterals

Kind of collateral	Responses	% of responses	% of cases
No collateral	451	94%	138%
Residential land	4	1%	1%
Residential land	26	5%	8%
Total	481	100%	

328 cases

E. Health status of Main income earner/Head of Household

1	Is the main income earner of the HH/Head of the HH, never sick, seldom sick, often sick or always sick?	1. Never 2. Seldom 3. Often 4. Always

Is the main income earner of the HH/Head of the HH, never sick, seldom sick, often sick or always sick? by village

		Is the main income earner of the HH/Head of the HH, never sick, seldom sick, often sick or alway sick?				
		Never	**Seldom**	**Often**	**Always**	**Total**
Village code	**Trapeang Thom**	6	71	24	1	102
	Prey Pi	8	62	32	3	105
	Krasang Meanchey	1	63	36	1	101
	Thmei	3	49	46	2	100
	Damnak Kralanh	5	66	29	0	100
Total		23	311	167	7	508

F. Susceptibility to disaster

1	How regularly does your HH face a crisis like natural disasters, serious illness, death, destruction of crops or death of animals, never, seldom, often or always?	1. Never (Continue with G) 2. Seldom 3. Often 4. Always

How regularly does your HH face a crisis like natural disasters, serious illness, death, destruction of crop or death of animals, never, seldom, often or always? by village

		How regularly does your HH face a crisis like natural disasters, serious illness, death, destruction of crop or death of animals, never, seldom, often or always?			
		Never	**Seldom**	**Often**	**Total**
Village code	**Trapeang Thom**	32	61	9	102
	Prey Pi	1	71	33	105
	Krasang Meanchey	3	76	22	101
	Thmei	4	69	27	100
	Damnak Kralanh	3	84	13	100
Total		43	361	104	508

2	In the past one year, has your household faced any of the following crises?	Yes	No	If yes, how much was the loss/were the costs involved – convert into money terms 3.1-3.8
2.1	Death of HH member			
2.2	Serious disease or injury of HH member that cost a lot of money			
2.3	Natural disaster (drought, flooding, storm,…)			
2.4	Crop heavily destroyed by pests			
2.5	Death of animals raised resulting in big loss			
2.6	Robbery, theft, being cheated…			
2.7	Other (SPECIFY)			
2.8	**Total Loss (OFFICE)**			

Frequency of Crises by village

		Village code					Total
		Trapeang Thom	**Prey Pi**	**Krasang Meanchey**	**Thmei**	**Damnak Kralanh**	
Death HH member	No	93	103	97	93	96	482
	Yes	9	2	4	7	3	25
Serious disease	No	71	52	50	34	49	256
	Yes	31	53	51	66	51	252
Natural disaster	No	85	6	7	14	48	160
	Yes	17	99	94	86	52	348
Crop loss	No	97	95	93	92	87	464
	Yes	5	10	8	8	13	44
Death animals	No	63	29	21	27	14	154
	Yes	39	76	80	73	86	354
Robbery	No	92	77	81	81	90	421
	Yes	10	28	20	19	10	87
Other	No	102	105	101	100	100	508
Total YES		111	268	257	259	215	1110

Statistics Total loss for the last year through crises by village

	Village code			Statistic	Std. Error
Total Loss (OFFICE) (If yes, how much was the loss/were the cost involved- convert into money terms)	**Trapeang Thom**	**Mean**		**45.1543**	6.24151
		95% Confidence Interval for Mean	Lower Bound	32.7028	
			Upper Bound	57.6058	
		5% Trimmed Mean		**38.1159**	
		Median		21.0000	
		Std. Deviation		52.22025	
		Minimum		.00	
		Maximum		270.00	
	Prey Pi	**Mean**		**120.6394**	9.09879
		95% Confidence Interval for Mean	Lower Bound	102.5941	
			Upper Bound	138.6847	
		5% Trimmed Mean		**112.6656**	
		Median		101.0000	
		Std. Deviation		92.78977	
		Minimum		6.50	
		Maximum		560.00	
	Krasang Meanchey	**Mean**		**78.1342**	6.19855
		95% Confidence Interval for Mean	Lower Bound	65.8318	
			Upper Bound	90.4366	
		5% Trimmed Mean		**71.5011**	
		Median		58.5000	
		Std. Deviation		61.36254	
		Minimum		6.00	
		Maximum		350.00	
	Thmei	**Mean**		**90.0381**	9.34235
		95% Confidence Interval for Mean	Lower Bound	71.4912	
			Upper Bound	108.5850	
		5% Trimmed Mean		**78.4190**	
		Median		60.0000	
		Std. Deviation		91.53594	
		Minimum		4.00	
		Maximum		515.00	
	Damnak Kralanh	**Mean**		**79.4701**	8.98588
		95% Confidence Interval for Mean	Lower Bound	61.6333	
			Upper Bound	97.3069	
		5% Trimmed Mean		**66.4908**	
		Median		59.0000	
		Std. Deviation		88.50066	
		Minimum		10.00	
		Maximum		550.00	

3	if you had a major illness in your family last year how long did it last?	1. Less than 5 days
		2. 5-14 days
		3. 15-30 days
		4. More than 30 days

If you had a major illness in your family last year how long did it last? by village

		If you had a major illness in your family last year how long did it last?				
		Less than 5 days	**5-14 days**	**15-30 days**	**More than 30 days**	**Total**
Village code	**Trapeang Thom**	34	12	8	16	70
	Prey Pi	49	23	11	21	104
	Krasang Meanchey	47	28	13	10	98
	Thmei	41	32	8	15	96
	Damnak Kralanh	53	32	5	7	97
Total		224	127	45	69	465

G. Land & Fish ponds

1	Do you have land **under cultivation**?	1. No
		2. Yes, own land
		3. Yes, renting land/ sharing arrangement
		4. Yes, other
2	If the answers 2, 3 & 4, how many ha. of land?	……ha
3	Do you have resident land?	1. No
		2. Yes, own land
		3. Yes, renting land
		4. Yes, other
4	Main source of water for farming in wet seasons	1. Irrigated/access to river, pond, well
		2. Rain water
		3. NA
5	Main source of water for farming in dry seasons	1. Irrigated/access to river, pond, well
		2. Rain water
		3. NA
6	How would you rate the quality of your productive land?	1. First quality
		2. Second quality
		3. Third quality
		4. NA
7	Does your HH have its own pond for fish?	1. Yes
		2. No

Note for Interviewer

Explain to respondent the quality rating as follows:
First quality = ……
Second quality = ……...
Third Quality = …….

Do you have land under cultivation? by village

		Village code					
		Trapeang Thom	**Prey Pi**	**Krasang Meanchey**	**Thmei**	**Damnak Kralanh**	**Total**
Do you have land under cultivation?	**No**	19	1	0	5	0	25
	Yes, own land	83	104	99	92	99	477
	Yes, renting land/sharing arrangement	0	0	2	1	1	4
	Yes, other (brick kiln owner ...)	0	0	0	2	0	2
Total		102	105	101	100	100	508

Statistics for amount of land under cultivation by village

	Village code			Statistic	Std. Error
How many ha. of land?	**Trapeang Thom**	**Mean**		**.6442**	.05582
		95% Confidence Interval for Mean	Lower Bound	.5332	
			Upper Bound	.7553	
		5% Trimmed Mean		**.5973**	
		Median		.5000	
		Std. Deviation		.50857	
		Minimum		.02	
		Maximum		2.50	
	Prey Pi	**Mean**		**1.1852**	.08614
		95% Confidence Interval for Mean	Lower Bound	1.0143	
			Upper Bound	1.3560	
		5% Trimmed Mean		1.1150	
		Median		1.0000	
		Std. Deviation		.87849	
		Minimum		.09	
		Maximum		5.00	
	Krasang Meanchey	**Mean**		**.6106**	.03872
		95% Confidence Interval for Mean	Lower Bound	.5338	
			Upper Bound	.6874	
		5% Trimmed Mean		**.5778**	
		Median		.5000	
		Std. Deviation		.38912	
		Minimum		.02	
		Maximum		2.00	
	Thmei	**Mean**		**.5304**	.04457
		95% Confidence Interval for Mean	Lower Bound	.4419	
			Upper Bound	.6189	
		5% Trimmed Mean		**.4978**	
		Median		.5000	
		Std. Deviation		.43441	
		Minimum		.01	
		Maximum		2.00	
	Damnak Kralanh	**Mean**		**1.2098**	.08272
		95% Confidence Interval for Mean	Lower Bound	1.0457	
			Upper Bound	1.3739	
		5% Trimmed Mean		**1.1558**	
		Median		1.0000	
		Std. Deviation		.82720	
		Minimum		.03	
		Maximum		4.00	

How would you rate the quality of your productive land? by village

		Village code					
		Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	Total
How would you rate the quality of your productive land?	First quality	0	4	1	9	8	22
	Second quality	50	57	45	54	70	276
	Third quality	33	43	55	32	22	185
Total		83	104	101	95	100	483

Do you have resident land? by village

		Village code					
		Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	Total
Do you have resident land?	No	1	3	4	5	3	16
	Yes, own land	100	99	94	92	93	478
	Yes, renting land	0	1	0	0	0	1
	Yes, other (relative house)	1	2	3	3	4	13
Total		102	105	101	100	100	508

Main source of water for farming in wet seasons by village

		Village code					
		Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	Total
Main source of water for farming in wet seasons	Irrigated/access to river, pond, well	2	4	11	5	0	22
	Rain water	81	100	90	90	100	461
Total		83	104	101	95	100	483

Main source of water for farming in dry seasons by village

		Village code					
		Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	Total
Main source of water for farming in dry seasons	Irrigated/access to river, pond, well	72	54	65	60	66	317
	Rain water	11	50	36	35	34	166
Total		83	104	101	95	100	483

Does your HH have its own pond for fish? by village

		Village code					
		Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	Total
Does your HH have its own pond for fish?	Yes	17	4	0	1	1	23
	No	85	101	101	99	99	485
Total		102	105	101	100	100	508

H. Transportation assets

		Transportation means	Value Estimate
1	Transportation means, excluding farming equipment	1 Horse/Ox cart	
		2 Old bicycle	
		3 New Bicycle	
		4 Old Motorbike	
		5 New Motorbike	
		6 Car	
		7 Lorry	
		8 Boat with motor	
		9 Boat without motor	
		10 None	
2	Total Value estimate **(OFFICE)**		

MONETARY VALUE TO BE ESTABLISHED PER VILLAGE BY SOME KEY INFORMANT INTERVIEWS

Transport assets owned by village

		Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	Total
Horse/Oxcart	No	87	49	94	71	36	337
	Yes	15	56	7	29	64	171
Old bicycle	No	40	21	50	37	16	164
	Yes	62	84	51	63	84	344
New bicycle	No	94	103	101	97	94	489
	Yes	8	2	0	3	6	19
Old Motorbike	No	97	102	101	97	90	487
	Yes	5	3	0	3	10	21
New Motorbike	No	102	105	101	99	95	502
	Yes	0	0	0	1	5	6
Car	No	102	105	101	100	100	508
	Yes	0	0	0	0	0	0
Lorry	No	102	105	101	100	100	508
	Yes	0	0	0	0	0	0
Boat with motor	No	99	105	101	100	100	505
	Yes	3	0	0	0	0	3
Boat without motor	No	100	105	101	100	100	506
	Yes	2	0	0	0	0	2
Total		102	105	101	100	100	508

Statistics transportation assets total value by village

	Village code			Statistic	Std. Error
Total value estimate (office) in 10000 Riel	**Trapeang Thom**	**Mean**		**18.3039**	6.95483
		95% Confidence Interval for Mean	Lower Bound	4.5074	
			Upper Bound	32.1004	
		5% Trimmed Mean		**8.0752**	
		Median		5.0000	
		Std. Deviation		70.24029	
		Minimum		.00	
		Maximum		680.00	
	Prey Pi	**Mean**		**22.0905**	2.10651
		95% Confidence Interval for Mean	Lower Bound	17.9132	
			Upper Bound	26.2678	
		5% Trimmed Mean		**20.3968**	
		Median		30.0000	
		Std. Deviation		21.58534	
		Minimum		.00	
		Maximum		155.00	
	Krasang Meanchey	**Mean**		**3.6436**	.62022
		95% Confidence Interval for Mean	Lower Bound	2.4131	
			Upper Bound	4.8741	
		5% Trimmed Mean		**2.5770**	
		Median		3.0000	
		Std. Deviation		6.23311	
		Minimum		.00	
		Maximum		33.00	
	Thmei	**Mean**		**15.5050**	2.43924
		95% Confidence Interval for Mean	Lower Bound	10.6650	
			Upper Bound	20.3450	
		5% Trimmed Mean		**12.2833**	
		Median		5.0000	
		Std. Deviation		24.39236	
		Minimum		.00	
		Maximum		160.00	
	Damnak Kralanh	**Mean**		**38.6950**	7.18302
		95% Confidence Interval for Mean	Lower Bound	24.4423	
			Upper Bound	52.9477	
		5% Trimmed Mean		**26.0722**	
		Median		16.2500	
		Std. Deviation		71.83018	
		Minimum		.00	
		Maximum		443.00	

I. Other assets

		Assets	Value estimate
1	Farming equipment	1. Plough… for the Farm	
		2. Tractor/iron buffalo	
		3. Irrigation pump	
2	Other equipment	1. Sewing Machine	
		2. Fishing gear (net, basket, etc.) for HH consumption	
		3. Fishing gear (nets, baskets, etc.) for commercial use	
		4. Large battery	
		5. Generator	
		6. Rice or small mill	
3	Media equipment	1. Radio	
		2. tape/ B-W Television	
		3. Color TV	
		4. CD/VCD/DVD player	
		5. ICOM radio/head phone	
		6. HIFI	
		7. None	
4	Other valuables	1. Jewelry	
		2. Clothes to wear during ceremonial occasions	
5	Land	1. Non-cultivated Land: area……type……..	
6	Stocks	1. Common property resources and crops (FOR THOSE NOT GATHERING AND/OR PRODUCING THEMSELVES – SEE NON-CASH INCOME QUESTION)	
		2. Other stocks	
7	Total value estimate **(OFFICE)**		

MONETARY VALUE TO BE ESTABLISHED PER VILLAGE BY SOME KEY INFORMANT INTERVIEWS

Farming Equipment by village

		Village code					Total
		Trapeang Thom	**Prey Pi**	**Krasang Meanchey**	**Thmei**	**Damnak Kralanh**	
Plough	No	60	20	59	52	26	217
	Yes	42	85	42	48	74	291
Total		102	105	101	100	100	508
Tractor/ iron buffalo	No	101	105	100	100	94	500
	Yes	1	0	1	0	6	8
Irrigation pump	No	100	104	101	99	94	498
	Yes	2	1	0	1	6	10

Other equipment by village

		Village code					Total
		Trapeang Thom	**Prey Pi**	**Krasang Meanchey**	**Thmei**	**Damnak Kralanh**	
Sewing machine	No	99	103	101	99	97	499
	Yes	3	2	0	1	3	9
Irrigation pump	No	100	104	101	99	94	498
	Yes	2	1	0	1	6	10
Fishing gear for HH consumption	No	48	82	79	73	77	373
	Yes	54	23	22	27	23	135
Fishing gear for commercial use	No	96	105	101	100	100	502
	Yes	6	0	0	0	0	6
Large battery	No	38	32	55	44	31	200
	Yes	64	73	46	56	69	308
Generator	No	101	104	101	98	99	503
	Yes	1	1	0	2	1	5
Rice or small mill	No	102	105	101	99	93	500
	Yes	0	0	0	1	7	8
Total		102	105	101	100	100	508

Media equipment by village code

		Village code					Total
		Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	
Radio	No	54	57	80	83	73	347
	Yes	48	48	21	17	27	161
Tape/B-W TV	No	92	81	94	79	66	412
	Yes	10	24	7	21	34	96
Color TV	No	99	105	101	99	99	503
	Yes	3	0	0	1	1	5
CD/VCD/DVD player	No	102	105	101	98	95	501
	Yes	0	0	0	2	5	7
ICOM radio/ headphone	No	102	105	101	100	99	507
	Yes	0	0	0	0	1	1
HIFI	No	102	105	101	98	99	505
	Yes	0	0	0	2	1	3
Total		102	105	101	100	100	508

Other valuables, forest land and stocks by village code

		Village code					Total
		Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	
Jewelry	No	52	58	88	53	43	294
	Yes	50	47	13	47	57	214
Cloths for ceremonies	No	15	19	22	13	7	76
	Yes	87	86	79	87	93	432
(forest) land	No	99	90	96	98	98	481
	Yes	3	15	5	2	2	27
Stocks common property resources	No	101	104	101	99	98	503
	Yes	1	1	0	1	2	5
Other stocks	No	102	105	101	100	100	508

Statistics value estimates other assets by village

	Village code			Statistic	Std. Error
Total value estimate (OFFICE) in 10000 Riel	**Trapeang Thom**	**Mean**		**40.2314**	5.98141
		95% Confidence Interval for Mean	Lower Bound	28.3659	
			Upper Bound	52.0969	
		5% Trimmed Mean		**30.1345**	
		Median		20.5000	
		Std. Deviation		60.40925	
		Minimum		.00	
		Maximum		343.00	
	Prey Pi	**Mean**		**36.8676**	6.97192
		95% Confidence Interval for Mean	Lower Bound	23.0420	
			Upper Bound	50.6932	
		5% Trimmed Mean		**25.0992**	
		Median		17.5000	
		Std. Deviation		71.44094	
		Minimum		1.30	
		Maximum		581.50	
	Krasang Meanchey	**Mean**		**10.3129**	1.37297
		95% Confidence Interval for Mean	Lower Bound	7.5889	
			Upper Bound	13.0368	
		5% Trimmed Mean		**8.1485**	
		Median		7.5000	
		Std. Deviation		13.79816	
		Minimum		.00	
		Maximum		86.00	
	Thmei	**Mean**		**30.6030**	8.64592
		95% Confidence Interval for Mean	Lower Bound	13.4476	
			Upper Bound	47.7584	
		5% Trimmed Mean		**19.1876**	
		Median		16.6000	
		Std. Deviation		86.45918	
		Minimum		.00	
		Maximum		840.70	
	Damnak Kralanh	**Mean**		**82.1653**	13.11141
		95% Confidence Interval for Mean	Lower Bound	56.1494	
			Upper Bound	108.1812	
		5% Trimmed Mean		**60.6979**	
		Median		38.3500	
		Std. Deviation		131.11409	
		Minimum		.00	
		Maximum		635.00	

J. Lighting/Electricity

1	Main lighting used in the household	1. Publicly/privately provided electricity
		2. Generator
		3. Battery
		4. Kerosene lamp
		5. Torch
		6. Other

Main lighting used in the household by village

		Village code					
		Trapeang Thom	**Prey Pi**	**Krasang Meanchey**	**Thmei**	**Damnak Kralanh**	**Total**
Main lighting used in the household	**Generator**	1	0	0	1	0	2
	Battery	7	11	4	4	41	67
	Kerosene lamp	94	92	96	95	59	436
	Torch	0	2	1	0	0	3
Total		102	105	101	100	100	508

K. Housing

1	Housing type (Record Observation)	1 Roof	1Thatch/leaves/tent
			2 Galvanized
			3 Tiles
			4 Concrete
		2 Wall	1 None
			2 Thatch/leaves
			3 Bamboo
			4 Wooden
			5 Galvanized
			6 Concrete
		3 Floor	1 None/on the ground
			2 Bamboo
			3 Wooden
			4 Concrete/ Tiles
		4 Size	1 Big (6 x 8 meters)
			2 Medium (5 x 7 meters)
			3 Small (4 x 6 meters)
			4 Very small (4 x 5 meters or smaller)
		5 Status	1 New (best)
			2 Not new and not old (good+)
			3 Old (good-)
			4 Old & dilapidated (worst)
		6 susceptible to flooding	1 Yes
			2 No

Housing type (Roof) by village

		Village code					Total
		Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	
Housing type (Roof)	Thatch/leaves/tent	35	69	88	77	8	277
	Galvanized	62	30	9	17	29	147
	Tiles	4	6	4	6	63	83
	Concrete	1	0	0	0	0	1
Total		102	105	101	100	100	508

Housing type (Wall) by village

		Village code					Total
		Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	
Housing type (Wall)	None	0	0	2	2	2	6
	Thatch/leaves	83	89	95	77	42	386
	Bamboo	2	0	0	2	1	5
	Wooden	10	15	4	18	45	92
	Galvanized	6	1	0	0	8	15
	Concrete	1	0	0	1	2	4
Total		102	105	101	100	100	508

Housing type (Floor) by village

		Village code					Total
		Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	
Housing type (Floor)	None/on the ground	39	16	4	9	24	92
	Bamboo	16	15	30	56	2	119
	Wooden	46	74	67	34	74	295
	Concrete/Tiles	1	0	0	1	0	2
Total		102	105	101	100	100	508

Housing type (Size) by village

		Village code					Total
		Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	
Housing type (Size)	Big (6 x 8 meters)	6	8	1	0	20	35
	Medium (5 x 7 meters)	41	23	8	11	43	126
	Small (4 x 6 meters)	35	34	41	38	28	176
	Very small (4 x 5 meters or smaller)	20	40	51	51	9	171
Total		102	105	101	100	100	508

Housing type (Status) by village

		Village code					Total
		Trapeang Thom	**Prey Pi**	**Krasang Meanchey**	**Thmei**	**Damnak Kralanh**	
Housing type (Status)	**New (best)**	1	3	3	1	3	11
	Not new and not old (good+)	41	16	13	13	46	129
	Old (good-)	42	56	48	45	38	229
	Old & dilapidated (worst)	18	30	37	41	13	139
Total		102	105	101	100	100	508

Housing type (susceptible to flooding) by village

		Village code					
		Trapeang Thom	**Prey Pi**	**Krasang Meanchey**	**Thmei**	**Damnak Kralanh**	**Total**
Housing type (susceptible to flooding)	**Yes**	14	10	20	21	9	74
	No	88	95	81	79	91	434
Total		102	105	101	100	100	508

Housing type (Floor) by Housing type (Wall) by Housing type (Roof) by village

Housing type (Roof)	Housing type (Wall)			Village code					Total
				Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	
Thatch/leaves/tent	None	Housing type (Floor)	None/on the ground			1	1		2
			Bamboo			0	1		1
			Wooden			1	0		1
			Total			2	2		4
	Thatch/leaves	Housing type (Floor)	None/on the ground	19	14	1	3	7	44
			Bamboo	7	14	29	48	0	98
			Wooden	9	36	53	15	1	114
			Total	35	64	83	66	8	256
	Wooden	Housing type (Floor)	None/on the ground		1	1	3		5
			Bamboo		0	0	2		2
			Wooden		4	2	4		10
			Total		5	3	9		17
Galvanized	Thatch/leaves	Housing type (Floor)	None/on the ground	17	1	1	0	8	27
			Bamboo	6	1	1	3	1	12
			Wooden	21	21	6	7	11	66
			Concrete/Tiles	1	0	0	0	0	1
			Total	45	23	8	10	20	106
	Wooden	Housing type (Floor)	None/on the ground	1	0	0	2	2	5
			Wooden	8	7	1	4	3	23
			Total	9	7	1	6	5	28
	Bamboo	Housing type (Floor)	Bamboo	1					1
			Wooden	1					1
			Total	2					2
	Galvanized	Housing type (Floor)	None/on the ground	1				1	2
			Bamboo	1				0	1
			Wooden	4				1	5
			Total	6				2	8
	Concrete	Housing type (Floor)	None/on the ground				0	2	2
			Concrete/Tiles				1	0	1
			Total				1	2	3

Housing type (Roof)	Housing type (Wall)			Village code					Total
Tiles	None	Housing type (Floor)	None/on the ground					1	1
			Wooden					1	1
		Total						2	2
	Thatch/leaves	Housing type (Floor)	None/on the ground	0	0	0	0	1	1
			Bamboo	0	0	0	1	0	1
			Wooden	3	2	4	0	13	22
		Total		3	2	4	1	14	24
	Wooden	Housing type (Floor)	None/on the ground	0	0		0	2	2
			Bamboo	1	0		0	1	2
			Wooden	0	3		3	37	43
		Total		1	3		3	40	47
	Bamboo	Housing type (Floor)	Bamboo				1	0	1
			Wooden				1	1	2
		Total					2	1	3
	Galvanized	Housing type (Floor)	Wooden		1			6	7
		Total			1			6	7
Concrete	Concrete	Housing type (Floor)	None/on the ground	1					1
		Total		1					1

For more tables on these variables: see annex on housing situation

L. Livestock

How many animals and poultry does your household own or have otherwise access to without costs/payment (sharing or borrowing)?

ANIMALS				
	1.Category	Number	Arrangement	Estimated value
1	2.Cow			
	3.Buffalo			
	4.Horse			
	5.Pig			
	6.Sheep			
	7.Goat			
	8.Others (specify)			
POULTRY				
2	1.Chickens			
	2.Ducks			
	3.Others (specify)			
3	Total estimated value (OFFICE)			

Codes for arrangement
Own = 1
Share = 2
Borrow = 3

MONETARY VALUE CATEGORIES TO BE ESTABLISHED PER VILLAGE BY SOME KEY INFORMANT INTERVIEWS

Descriptive Statistics Animals for Trapeang Thom

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Cow (Number)	102	0	6	123	1.21	1.245
Buffalo (Number)	102	0	0	0	.00	.000
Horse (Number)	102	0	0	0	.00	.000
Pig (Number)	102	0	14	152	1.49	2.563
Sheep (Number)	102	0	0	0	.00	.000
Goat (Number)	102	0	0	0	.00	.000
Other (Number)	102	0	0	0	.00	.000
Chickens (Number)	102	0	20	470	4.61	5.530
Ducks (Number)	102	0	14	69	.68	2.158
Other (Number)	102	0	0	0	.00	.000
Valid N (listwise)	102					

Descriptive Statistics animals for Prey Pi

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Cow (Number)	105	0	6	191	1.82	1.099
Buffalo (Number)	105	0	0	0	.00	.000
Horse (Number)	105	0	0	0	.00	.000
Pig (Number)	105	0	5	50	.48	.822
Sheep (Number)	105	0	1	2	.02	.137
Goat (Number)	105	0	0	0	.00	.000
Other (Number)	105	0	0	0	.00	.000
Chickens (Number)	105	0	25	477	4.54	4.583
Ducks (Number)	105	0	20	130	1.24	3.257
Other (Number)	105	0	0	0	.00	.000
Valid N (listwise)	105					

Descriptive Statistics animals for Krasang Meanchey

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Cow (Number)	101	0	3	55	.54	.819
Buffalo (Number)	101	0	0	0	.00	.000
Horse (Number)	101	0	0	0	.00	.000
Pig (Number)	101	0	2	38	.38	.526
Sheep (Number)	101	0	0	0	.00	.000
Goat (Number)	101	0	0	0	.00	.000
Other (Number)	101	0	0	0	.00	.000
Chickens (Number)	101	0	10	217	2.15	2.156
Ducks (Number)	101	0	12	91	.90	2.330
Other (Number)	101	0	0	0	.00	.000
Valid N (listwise)	101					

Descriptive Statistics animals for Thmei

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Cow (Number)	100	0	5	113	1.13	1.031
Buffalo (Number)	100	0	2	10	.10	.438
Horse (Number)	100	0	0	0	.00	.000
Pig (Number)	100	0	2	49	.49	.628
Sheep (Number)	100	0	0	0	.00	.000
Goat (Number)	100	0	0	0	.00	.000
Other (Number)	100	0	0	0	.00	.000
Chickens (Number)	100	0	25	351	3.51	3.642
Ducks (Number)	100	0	100	307	3.07	10.454
Other (Number)	100	0	0	0	.00	.000
Valid N (listwise)	100					

Descriptive Statistics animals for Damnak Kralanh

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Cow (Number)	100	0	8	210	2.10	1.439
Buffalo (Number)	100	0	0	0	.00	.000
Horse (Number)	100	0	1	2	.02	.141
Pig (Number)	100	0	8	91	.91	1.129
Sheep (Number)	100	0	1	1	.01	.100
Goat (Number)	100	0	0	0	.00	.000
Other (Number)	100	0	4	8	.08	.563
Chickens (Number)	100	0	60	470	4.70	6.714
Ducks (Number)	100	0	150	1279	12.79	19.308
Other (Number)	100	0	10	21	.21	1.274
Valid N (listwise)	100					

Cow (Number) by Cow (Arrangement)

		Cow (Arrangement)				**Total**
		0	**Own**	**Share**	**Borrow**	
Cow (Number)	0	166	0	0	0	166
	1	0	84	17	3	104
	2	0	157	5	7	169
	3	0	40	1	1	42
	4	0	18	0	0	18
	5	0	4	0	0	4
	6	0	4	0	0	4
	8	0	1	0	0	1
Total		**166**	**308**	**23**	**11**	508

Pig (Number) by Pig (Arrangement)

		Pig (Arrangement)				**Total**
		0	**Own**	**Share**	**Borrow**	
Pig (Number)	0	264	0	0	0	264
	1	0	166	15	1	182
	2	0	44	2	0	46
	3	0	5	0	0	5
	4	0	2	0	0	2
	5	0	1	0	0	1
	6	0	1	1	0	2
	8	0	1	0	0	1
	9	0	1	0	0	1
	10	0	1	0	0	1
	11	0	1	0	0	1
	14	0	2	0	0	2
Total		**264**	**225**	**18**	**1**	508

Statistics total value estimate animals and poultry by village

	Village code			Statistic	Std. Error
Total estimated value (OFFICE) in 10000 Riel	**Trapeang Thom**	**Mean**		**137.4882**	13.09047
		95% Confidence Interval for Mean	Lower Bound	111.5203	
			Upper Bound	163.4562	
		5% Trimmed Mean		**127.4107**	
		Median		109.7500	
		Std. Deviation		132.20728	
		Minimum		.00	
		Maximum		592.00	
	Prey Pi	**Mean**		**204.2336**	14.70217
		95% Confidence Interval for Mean	Lower Bound	175.0787	
			Upper Bound	233.3886	
		5% Trimmed Mean		**193.2831**	
		Median		205.0000	
		Std. Deviation		150.65237	
		Minimum		.00	
		Maximum		857.40	
	Krasang Meanchey	**Mean**		**62.9688**	10.58842
		95% Confidence Interval for Mean	Lower Bound	41.9617	
			Upper Bound	83.9759	
		5% Trimmed Mean		**48.2464**	
		Median		12.2500	
		Std. Deviation		106.41229	
		Minimum		.00	
		Maximum		702.00	
	Thmei	**Mean**		**149.1290**	12.67464
		95% Confidence Interval for Mean	Lower Bound	123.9798	
			Upper Bound	174.2782	
		5% Trimmed Mean		**140.9878**	
		Median		133.3000	
		Std. Deviation		126.74641	
		Minimum		.00	
		Maximum		543.00	
	Damnak Kralanh	**Mean**		**304.0470**	21.41600
		95% Confidence Interval for Mean	Lower Bound	261.5530	
			Upper Bound	346.5410	
		5% Trimmed Mean		**290.0633**	
		Median		307.5000	
		Std. Deviation		214.15996	
		Minimum		.00	
		Maximum		1064.00	

M. Job and Employment Head of HH or Main Income Earner (for last 30 days)

Income Pattern of Main income earner/Head of Household		
1.	Is the daily work of the main income earner of the HH/Head of the HH, a permanent job, a temporary job, seasonal work or is he or she unemployed?	1. Permanent
		2. Temporary
		3. Seasonal
		4. Unemployed
Source of Income		
2	Use code number below	

***Code of job/occupation**

1. None	7. House work	13. Moto driver	19 Skilled employment
2. Begging	8. Agriculture	14. Small or occasional business	20. Unskilled employment
3. Common property resource gathering, foraging	9. Fishing	15. Established business	20. Home based labor (sewing, food preparation)
4. Street vendor	10. Herding	16. Palm wine or sugar production	21. Other
5. Waste picking	11. Hunting	17. Construction worker	
6. Day labor	12. Taxi driver	18. Charcoal	

Is the daily work of the main income earner of the HH/Head of the HH, a permanent job, a temporary job, seasonal work or is he or she unemployed? by village

		Is the daily work of the main income earner of the HH/Head of the HH, a permanent job, a temporary job, seasonal work or is he or she unemployed?				
		Permanent	**Temporary**	**Seasonal**	**Unemployed**	**Total**
Village code	**Trapeang Thom**	52	14	35	1	102
	Prey Pi	12	12	80	1	105
	Krasang Meanchey	7	19	72	3	101
	Thmei	19	10	66	5	100
	Damnak Kralanh	30	12	55	3	100
Total		120	67	308	13	508

Source of Income by village

		Village code					Total
		Trapeang Thom	**Prey Pi**	**Krasang Meanchey**	**Thmei**	**Damnak Kralanh**	
Source of Income	**None**	1	1	3	5	3	13
	Common property resource gathering, foraging	0	1	0	0	0	1
	Street vendor	10	5	3	3	4	25
	Waste picking	0	0	1	1	0	2
	Day labor	41	37	51	45	12	186
	Agriculture	11	54	38	32	56	191
	Fishing	15	0	0	0	0	15
	Herding	0	0	0	0	1	1
	Moto driver	1	0	0	0	0	1
	Small or occasional business	4	2	1	2	7	16
	Established business	1	0	0	1	0	2
	Construction worker	1	0	2	1	3	7
	Skilled employment	2	3	0	7	8	20
	Unskilled emploment	15	2	2	3	5	27
	Home based labor (sewing, food preparation)	0	0	0	0	1	1
Total		102	105	101	100	100	508

Source of Income by Is the daily work of the main income earner of the HH/Head of the HH, a permanent job, a temporary job, seasonal work or is he or she unemployed?

		Is the daily work of the main income earner of the HH/Head of the HH, a permanent job, a temporary job, seasonal work or is he or she unemployed?				
		Permanent	**Temporary**	**Seasonal**	**Unemployed**	**Total**
Source of Income	**None**	0	0	0	13	13
	Common property resource gathering, foraging	0	0	1	0	1
	Street vendor	20	3	2	0	25
	Waste picking	0	1	1	0	2
	Day labor	14	50	122	0	186
	Agriculture	17	2	172	0	191
	Fishing	11	0	4	0	15
	Herding	1	0	0	0	1
	Moto driver	0	1	0	0	1
	Small or occasional business	14	0	2	0	16
	Established business	2	0	0	0	2
	Construction worker	2	5	0	0	7
	Skilled employment	19	0	1	0	20
	Unskilled emploment	19	5	3	0	27
	Home based labor (sewing, food preparation)	1	0	0	0	1
Total		120	67	308	13	508

For more tables on these variables: see annex on income situation

N. Regular expenditure other than crisis expenditure

	Item	Unit	Value /Unit	Total Month	Total Year
	Rice bought				
	Rice from own production or bartered				
	Buying Food (meat, fish, egg, vegetable, oil, ingredients,…)				
	Food from own field, gathered or bartered(convert into money as if purchased)				
	Other food expense (noodles, cakes, drinks,..)				
	Alcohol				
	Cigarettes				
	Personal care, products for use in the house				
	Clothes				
	Fuel				
	Transportation				
	Electricity, water				
	House/land rent				
	House maintenance/repair				
	Buying/maintaining/repairing assets				
	Health care				
	Education				
	Ceremonies				
	Registrations & other payments to officials				
	Other				

Codes for Unit
1 = Day
2 = Week
3 = Month
4 = Year

Note for Interviewer
For Rice and other food bought, explicitly ask if the household buys every single day. If so use DAY

For analysis: this is an additional poverty indicator.

To be calculated in the office from Crisis expenditure and regular expenditure:

TOTAL MONTHLY HH EXPENDITURE……
TOTAL YEARLY HH EXPENDITURE ……
TOTAL MONTHLY PER CAPITA EXPENDITURE ……
TOTAL YEARLY PER CAPITA EXPENDITURE ……

Statistics total yearly HH expenditure, incl. crisis expenditure, by village

	Village code			Statistic	Std. Error
Total yearly HH expenditure (incl. crisis exp.) in 10000 Riel	**Trapeang Thom**	**Mean**		**385.7223**	18.29886
		95% Confidence Interval for Mean	Lower Bound	349.4222	
			Upper Bound	422.0223	
		5% Trimmed Mean		372.1631	
		Median		367.9300	
		Std. Deviation		184.80947	
		Minimum		113.50	
		Maximum		1093.20	
	Prey Pi	**Mean**		**351.5833**	19.97615
		95% Confidence Interval for Mean	Lower Bound	311.9699	
			Upper Bound	391.1968	
		5% Trimmed Mean		**334.8245**	
		Median		350.7400	
		Std. Deviation		204.69464	
		Minimum		42.86	
		Maximum		1614.02	
	Krasang Meanchey	**Mean**		**271.2553**	14.18290
		95% Confidence Interval for Mean	Lower Bound	243.1169	
			Upper Bound	299.3938	
		5% Trimmed Mean		**260.2255**	
		Median		238.4400	
		Std. Deviation		142.53638	
		Minimum		69.94	
		Maximum		861.25	
	Thmei	**Mean**		**295.5385**	18.84624
		95% Confidence Interval for Mean	Lower Bound	258.1435	
			Upper Bound	332.9335	
		5% Trimmed Mean		**274.3302**	
		Median		251.9500	
		Std. Deviation		188.46244	
		Minimum		67.89	
		Maximum		1232.40	
	Damnak Kralanh	**Mean**		**502.3807**	36.39126
		95% Confidence Interval for Mean	Lower Bound	430.1726	
			Upper Bound	574.5888	
		5% Trimmed Mean		**456.1079**	
		Median		388.8000	
		Std. Deviation		363.91256	
		Minimum		65.90	
		Maximum		2413.06	

Statistics total yearly per capita expenditure, incl. crisis expenditure, by village

	Village code			Statistic	Std. Error
Total yearly per capita expenditure (incl. crisis exp.) in 10000 Riel	**Trapeang Thom**	**Mean**		**82.1937**	6.19441
		95% Confidence Interval for Mean	Lower Bound	69.9057	
			Upper Bound	94.4817	
		5% Trimmed Mean		**75.2285**	
		Median		69.6056	
		Std. Deviation		62.56043	
		Minimum		23.95	
		Maximum		590.40	
	Prey Pi	**Mean**		**77.0563**	4.26224
		95% Confidence Interval for Mean	Lower Bound	68.6041	
			Upper Bound	85.5085	
		5% Trimmed Mean		**73.0600**	
		Median		68.5267	
		Std. Deviation		43.67496	
		Minimum		19.34	
		Maximum		322.80	
	Krasang Meanchey	**Mean**		**68.5588**	4.63360
		95% Confidence Interval for Mean	Lower Bound	59.3659	
			Upper Bound	77.7517	
		5% Trimmed Mean		**62.4858**	
		Median		55.9375	
		Std. Deviation		46.56711	
		Minimum		17.49	
		Maximum		302.84	
	Thmei	**Mean**		**95.2862**	8.49845
		95% Confidence Interval for Mean	Lower Bound	78.4234	
			Upper Bound	112.1490	
		5% Trimmed Mean		**81.8924**	
		Median		69.1210	
		Std. Deviation		84.98449	
		Minimum		22.63	
		Maximum		616.20	
	Damnak Kralanh	**Mean**		**120.8338**	7.62652
		95% Confidence Interval for Mean	Lower Bound	105.7011	
			Upper Bound	135.9664	
		5% Trimmed Mean		**113.4424**	
		Median		104.8167	
		Std. Deviation		76.26519	
		Minimum		28.87	
		Maximum		481.84	

O. Food Security & Hunger

1	For how many months during the last year did your household have enough rice/other crops to eat?	……..Months (if 12 go to P)
2	Has there been hunger in this household during the last 3 Months because of lack of (any) food?	1. Never
		2. Sometimes
		3. Often
		4. All the time
3	During the last three months, how often did you eat rice porridge because you lacked rice?	1. Never
		2. Sometimes
		3. Often
		4. Always

For how many months during the last year did your household have enough rice/other crops to eat? by village

		Village code					
		Trapeang Thom	**Prey Pi**	**Krasang Meanchey**	**Thmei**	**Damnak Kralanh**	**Total**
For how many months during the last year did your household have enough rice/other crops to eat?	**0**	0	1	0	0	0	1
	1	10	11	11	0	0	32
	2	10	24	15	4	0	53
	3	14	19	20	11	3	67
	Subtotal 3 months or less	34	55	46	15	3	153
	4	12	8	15	14	4	53
	5	16	9	14	13	3	55
	6	10	12	10	11	4	47
	Subtotal 4 to 6 months	38	29	39	38	11	155
	7	5	2	5	10	4	26
	8	7	9	6	10	7	39
	9	6	3	2	10	4	25
	10	5	4	1	7	2	19
	11	2	1	0	3	2	8
	12	5	2	2	7	67	83
	Subtotal more than 6 months	27	21	16	47	86	200
Total		102	105	101	100	100	508

Has there been hunger in this household during the last 3 Months because of lack of (any) food? by village

		Village code					
		Trapeang Thom	**Prey Pi**	**Krasang Meanchey**	**Thmei**	**Damnak Kralanh**	**Total**
Has there been hunger in this household during the last 3 Months because of lack of (any) food?	**Never**	46	31	11	47	15	150
	Sometimes	32	38	29	28	12	139
	Often	19	34	54	18	6	131
	All the time	0	0	5	0	0	5
Total		97	103	99	93	33	425

Note: those who answered 12 months in the previous question were not asked this question

During the last three months, how often did you eat rice porridge because you lacked rice? by village

		Village code					
		Trapeang Thom	**Prey Pi**	**Krasang Meanchey**	**Thmei**	**Damnak Kralanh**	**Total**
During the last three months, how often did you eat rice porridge because you lacked rice?	**Never**	46	55	26	59	24	210
	Sometimes	36	31	25	23	7	122
	Often	15	16	45	11	2	89
	Always	0	1	3	0	0	4
Total		97	103	99	93	33	425

Note: see above

Rice bought (Unit) by Has there been hunger in this household during the last 3 Months because of lack of (any) food?

		Has there been hunger in this household during the last 3 Months because of lack of (any) food?				
		Never	**Sometimes**	**Often**	**All the time**	**Total**
Rice bought (Unit)	**0**	1	0	0	0	1
	Day	36	62	88	5	191
	Week	50	27	25	0	102
	Month	63	50	18	0	131
Total		150	139	131	5	425

Rice bought (Unit) by During the last three months, how often did you eat rice porridge because you lacked rice?

		During the last three months, how often did you eat rice porridge because you lacked rice?				
		Never	**Sometimes**	**Often**	**Always**	**Total**
Rice bought (Unit)	**0**	1	0	0	0	1
	Day	62	67	59	3	191
	Week	56	23	22	1	102
	Month	91	32	8	0	131
Total		210	122	89	4	425

Note: The unit of rice bought comes from the regular expenditure question (N); daily indicates poverty

During the last three months, how often did you eat rice porridge because you lacked rice? by Has there been hunger in this household during the last 3 Months because of lack of (any) food? by For how many months during the last year did your household have enough rice/other crops to eat?

For how many months during the last year did your household have enough rice/other crops to eat?	During the last three months, how often did you eat rice porridge because you lacked rice?	Has there been hunger in this household during the last 3 Months because of lack of (any) food?				Total
		Never	Sometimes	Often	All the time	
0	Always			1		1
1	Never	2	4	4	0	10
	Sometimes	0	2	6	0	8
	Often	0	0	11	1	12
	Always	0	0	0	2	2
2	Never	4	7	5	0	16
	Sometimes	0	10	6	0	16
	Often	3	1	16	1	21
3	Never	10	12	4		26
	Sometimes	1	10	12		23
	Often	0	3	15		18
4	Never	8	8	2	0	18
	Sometimes	0	13	9	0	22
	Often	0	1	11	1	13
5	Never	17	16	3		36
	Sometimes	4	10	1		15
	Often	2	1	0		3
	Always	0	0	1		1
6	Never	18	3	4		25
	Sometimes	6	5	2		13
	Often	2	2	5		9
7	Never	8	4	2		14
	Sometimes	3	4	1		8
	Often	2	1	1		4
8	Never	16	4	1		21
	Sometimes	4	7	0		11
	Often	0	1	6		7
9	Never	12	6			18
	Sometimes	4	1			5
	Often	1	1			2
10	Never	16	1	1		18
	Sometimes	0	0	1		1
11	Never	7	1			8

P. General perception about the identification process

1	Did you join the Village Planning Meeting?	1.Yes
		2.No (go to Q)
		3. NA (go to Q)
2	If YES, was a draft MVF List presented for comments?	1. Yes
		2. No

Note for interviewer

Only ask these questions in villages in which you know that the list was actually presented according to the village chief

Did you join the Village Planning Meeting? AND If YES, was a draft MVF List presented for comments? by village

		Village code					
		Trapeang Thom	**Prey Pi**	**Krasang Meanchey**	**Thmei**	**Damnak Kralanh**	**Total**
Did you join the Village Planning Meeting?	Yes	63	76	78	62	63	342
	No	39	29	23	38	37	166
Total		102	105	101	100	100	508
If YES, was a draft MVF List presented for comments?	Yes	43	59	64	49	49	264
	No	20	17	14	13	14	78
Total		63	76	78	62	63	342

Did you join the Village Planning Meeting? AND If YES, was a draft MVF List presented for comments? by village AND by Listed HH, Non-listed HH or HH identified by respondent

Listed, Non-listed or Identified by respondent			Village code					Total
			Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	
Listed HH	Did you join the Village Planning Meeting?	Yes	28	32	68	35	15	178
		No	7	10	21	11	9	58
		Total	35	42	89	46	24	236
Non-listed HH identified by VWG	Did you join the Village Planning Meeting?	Yes	35	40	10	26	48	159
		No	28	13	2	26	28	97
		Total	63	53	12	52	76	256
HH identified by CASS team	Did you join the Village Planning Meeting?	Yes	0	4		1		5
		No	4	6		1		11
		Total	4	10		2		16
Listed HH	If YES, was a draft MVF List presented for comments?	Yes	24	28	54	31	14	151
		No	4	4	14	4	1	27
		Total	28	32	68	35	15	178
Non-listed HH identified by VWG	If YES, was a draft MVF List presented for comments?	Yes	19	27	10	17	35	108
		No	16	13	0	9	13	51
		Total	35	40	10	26	48	159
HH identified by CAS team	If YES, was a draft MVF List presented for comments?	Yes		4		1		5
		Total		4		1		5

Q. false exclusions

1	Do you know any HH in your village who are just as poor or poorer than your family and who are not on the list of MVF?	1. Yes (Go to 2) 2. No
2.	If yes, can you describe them to us (name, address, data,…) Probe: are there any more that you know of?	

R. False inclusions

1	Do you know any HH in your village who are quite a bit richer than your family and who are also on the list of MVF?	1. Yes (Go to 2) 2. No
2.	If yes, can you describe them to us (name, address, data,…) Probe: are there any more that you know of?	

		Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	Total
False exclusions	**Listed**	4					4
	Not listed	2			1		3
Subtotal		6			1		7
False inclusions	**Listed**	1		1	2	1	5
	Not listed			1			1
	Not interviewed		1	1	2		4
Subtotal		1	1	3	4	1	10
Total		7	1	3	5	1	17

Note for interviewer
These questions are to be asked to 15 Households only in each village. The 15 HH have to be randomly selected from the HH on the MVFL

Construct lists without overlap of false inclusions and false exclusions of all HH mentioned by the 15 respondents.

For the false exclusions: check if all of these are included in the sample of 100 HH interviewed. Any HH not yet included: interview!

END INTERVIEW

Annex 4 Poverty indicators: Village Working Group criteria and CAS survey variables

	Village Working Group	CAS Survey	Village Working Group	CAS Survey
	Category 1 =Extremely Poor	**Category 1**	**Category 2 =Very Poor**	**Category 2**
House situation (See annex)	Very old and small cottage with very old, pierced, and torn palm leaf as roof and walls	Housing type (old and dilapidated) AND Housing size (very small) AND Roof (thatch/leaves/tent) AND walls [thatch/leaves/tent OR none] AND floor (none/on the ground) [Question K]	Very old and small house with very old and pierced thatch or palm leaf roof and walls or very old wooden wall with very old and pierced zinc roof. **Note**: A house sized 4 by 5 m., even with thatch or palm leaf roof and walls does not qualify (not very old thatch/palm leaf)	Housing type (old and dilapidated) AND Housing size (very small) AND Roof [(thatch/leaves/tent) or galvanized] AND walls [thatch/leaves/tent OR bamboo OR wood] AND floor [none/on the ground OR bamboo OR wood] with at least one of the characteristics (roof, walls, floor) not in the extremely poor category [Question K]
Rice and other crops production	Enough to feed the HH for 3 months	Enough to feed the HH for 3 months or less [Question O.1]	Enough to feed the HH for 4-6 months	Enough to feed the HH for 4-6 months [Question O.1]
Income situation (See annex)	Average income < 500 Riel/capita • No pig; if poultry: 1-10 • Selling labor, picking vegetable, and catching fish for sale • Often selling labor to other villagers for rice transplanting	Average TOTAL daily income < 500 Riel/capita [From HH information] AND HH owns no pig AND if poultry is owned only 1-9 [Question L.1&2]	Average income < 1000 Riels/capita • One pig or 11-20 poultry • Selling labor, picking vegetables and catching fish for sale • Occasionally selling labor to other villagers for rice transplanting	Average TOTAL daily income < 1000 Riel/capita [From HH information] AND max one pig is owned And if poultry, max 19 [Question L.1&2]
Cattle Raising	No cattle	No cows or buffalos [Question L.1]	One cow or buffalo (can be shared arrangement with other villager)	One cow or buffalo [Question L.1]
Means of transportation	Value < 100,000 Riel (can be an old bicycle)	Total value transportation assets < 100,000 Riel [Question H]	Value < 250,000 (can be 2 bicycles or very old motorbike)	Total value transportation assets < 250,000 Riel [Question H]
Assets	Nothing or a small radio only; no jewelry or new clothes and never join village ceremonies when officially invited	Max. Other assets (categories media equipment AND other valuables): 1 radio [Question I]	Radio or cassette player but no TV; no jewelry but new clothes and join village ceremonies occasionally	Max. other assets (categories media equipment AND other valuables): 1 radio AND 1 tape/B-W TV AND new cloths for ceremonies [Question I]
Food	Eat rice porridge often	Eat rice porridge often OR always [Question O.3]	Eat rice porridge occasionally but often eat rice without other dishes or eat it with fish sauce only	Eat rice porridge sometimes [Question O.3]

Scoring procedure and definition of extremely poor and very poor

- If the situation of a HH is reflected by the description in the *column for very poor* it gets a 1 *in that column*, if not it gets a 0. If it is reflected by the description in the *column of the poor* it gets a 1 *in that column*, if not it gets a zero. HH can only get a 1 in one of both columns (total possible non-zero scores across two columns = 7)
- *House situation* is considered the most important criterion and is given *double weight*, i.e. is scored with a 2.
- The scores are added up for each column separately.
- The *scores for very poor* are given *double weight*.
    - The total HH score is [total very poor column] x 2 plus [total poor column].
    - Maximum score is [1 x 2 (very poor house) + 6 x 1 (all other criteria very poor)] x 2 = 16.
    - Minimum score is 0 (no description in either column applies to the HH scored).
- Total score of 11-16 => HH is very poor (category 1)
- Total score of 6-10 => HH is poor (category 2)
- Total score 0-5 => HH is not one of the most vulnerable families and is out of the list

Annex 5 Housing situation

To explore the best way to differentiate between extremely poor and very poor we have cross tabulated the various housing variables in the data set. This enables us to empirically see what characteristics go together.

First all three aspects of the building: roof, walls and flooring:

Housing type (Floor) by Housing type (Roof) by Housing type (Wall)

Housing type (Wall)			Housing type (Roof)				Total
			Thatch/ leaves/ tent	Galvanized	Tiles	Concrete	
None	Housing type (Floor)	None/on the ground	2		1		3
		Bamboo	1		0		1
		Wooden	1		1		2
	Total		4		2		6
Thatch/leaves	Housing type (Floor)	None/on the ground	44	27	1		72
		Bamboo	98	12	1		111
		Wooden	114	66	22		202
		Concrete/Tiles	0	1	0		1
	Total		256	106	24		386
Bamboo	Housing type (Floor)	Bamboo		1	1		2
		Wooden		1	2		3
	Total			2	3		5
Wooden	Housing type (Floor)	None/on the ground	5	5	2		12
		Bamboo	2	0	2		4
		Wooden	10	23	43		76
	Total		17	28	47		92
Galvanized	Housing type (Floor)	None/on the ground		2	0		2
		Bamboo		1	0		1
		Wooden		5	7		12
	Total			8	7		15
Concrete	Housing type (Floor)	None/on the ground		2		1	3
		Concrete/Tiles		1		0	1
	Total			3		1	4

Next we introduce the status of the house variable:

Housing type (Floor) by Housing type (Status) by Housing type (Roof)

Housing type (Roof)			Housing type (Status)				Total
			New (best)	Not new and not old (good+)	Old (good-)	Old & dilapidated (worst)	
Thatch/ leaves/tent	Housing type (Floor)	None/on the ground		2	15	34	51
		Bamboo		4	42	55	101
		Wooden		12	74	39	125
	Total			18	131	128	277
Galvanized	Housing type (Floor)	None/on the ground	1	11	19	5	36
		Bamboo	0	6	6	2	14
		Wooden	6	51	37	1	95
		Concrete/Tiles	0	2	0	0	2
	Total		7	70	62	8	147
Tiles	Housing type (Floor)	None/on the ground	0	2	2	0	4
		Bamboo	0	1	3	0	4
		Wooden	4	38	30	3	75
	Total		4	41	35	3	83
Concrete	Housing type (Floor)	None/on the ground			1		1
	Total				1		1

Housing type (Wall) by Housing type (Status) by Housing type (Roof)

Housing type (Roof)			Housing type (Status)				Total
			New (best)	Not new and not old (good+)	Old (good-)	Old & dilapidated (worst)	
Thatch/ leaves/tent	Housing type (Wall)	None		0	1	3	4
		Thatch/leaves		17	119	120	256
		Wooden		1	11	5	17
	Total			18	131	128	277
Galvanized	Housing type (Wall)	Thatch/leaves	6	42	51	7	106
		Bamboo	0	1	1	0	2
		Wooden	1	17	10	0	28
		Galvanized	0	7	0	1	8
		Concrete	0	3	0	0	3
	Total		7	70	62	8	147
Tiles	Housing type (Wall)	None	0	1	1	0	2
		Thatch/leaves	1	10	12	1	24
		Bamboo	0	1	2	0	3
		Wooden	2	26	17	2	47
		Galvanized	1	3	3	0	7
	Total		4	41	35	3	83
Concrete	Housing type (Wall)	Concrete			1		1
	Total				1		1

Lastly we cross tabulate size with housing status and the most important of the three characteristics, roofing:

Housing type (Status) by Housing type (Size) by Housing type (Roof)

Housing type (Roof)			Housing type (Size)				Total
			Big (6 x 8 meters)	Medium (5 x 7 meters)	Small (4 x 6 meters)	Very small (4 x 5 meters or smaller)	
Thatch/leaves/tent	Housing type (Status)	Not new and not old (good+)	0	9	9	0	18
		Old (good-)	1	12	77	41	131
		Old & dilapidated (worst)	0	1	21	106	128
	Total		1	22	107	147	277
Galvanized	Housing type (Status)	New (best)	2	2	2	1	7
		Not new and not old (good+)	9	38	20	3	70
		Old (good-)	1	15	34	12	62
		Old & dilapidated (worst)	0	0	4	4	8
	Total		12	55	60	20	147
Tiles	Housing type (Status)	New (best)	1	3	0	0	4
		Not new and not old (good+)	14	24	3	0	41
		Old (good-)	7	20	4	4	35
		Old & dilapidated (worst)	0	1	2	0	3
	Total		22	48	9	4	83
Concrete	Housing type (Status)	Old (good-)		1			1
	Total			1			1

The combinations above show that the most accurate representation of the Village Working Group definition is as follows:

Extremely poor = Housing type (old and dilapidated) AND Housing size (very small) AND Roof (thatch/leaves/tent) AND walls [thatch/leaves/tent OR none] AND floor (none/on the ground)

Very Poor = Housing type (old and dilapidated) AND Housing size (very small) AND Roof [(thatch/leaves/tent) or galvanized] AND walls [thatch/leaves/tent OR bamboo OR wood] AND floor [none/on the ground OR bamboo OR wood] with at least one of the characteristics (roof, walls, floor) not in the extremely poor category.

Annex 6 Income situation
Use of the TOTAL daily income variable rather than the CASH daily income variable

The GTZ criteria include an income criterion that has the following implications:

- If HH has < 500 Riel/capita/day the HH is scored Extremely Poor
- If HH has 500 < x < 1000 Riel/per capita/day the HH is scored Very Poor

The understanding of the Village Working Groups of what income to include is unclear.

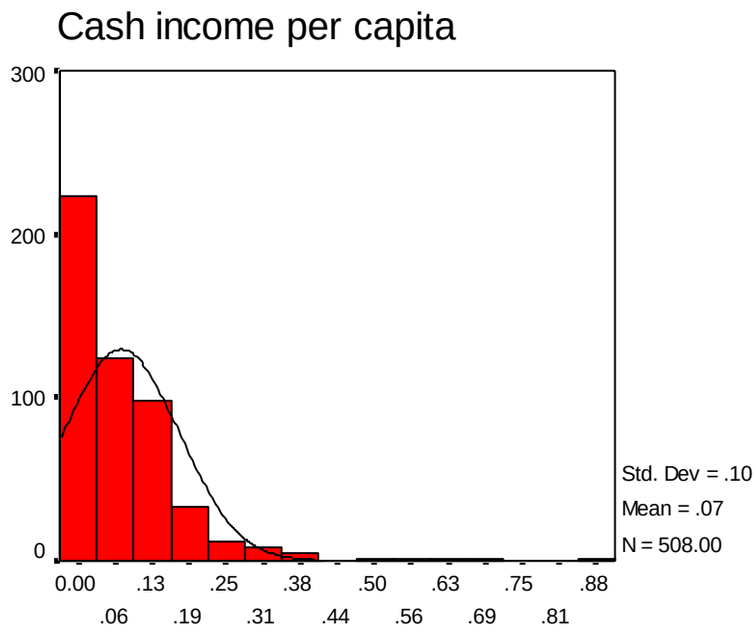
To find the best equivalent in the survey dataset and to determine how to use the other indicators mentioned within this criterion (pigs/poultry and pattern and source of income) we calculated:

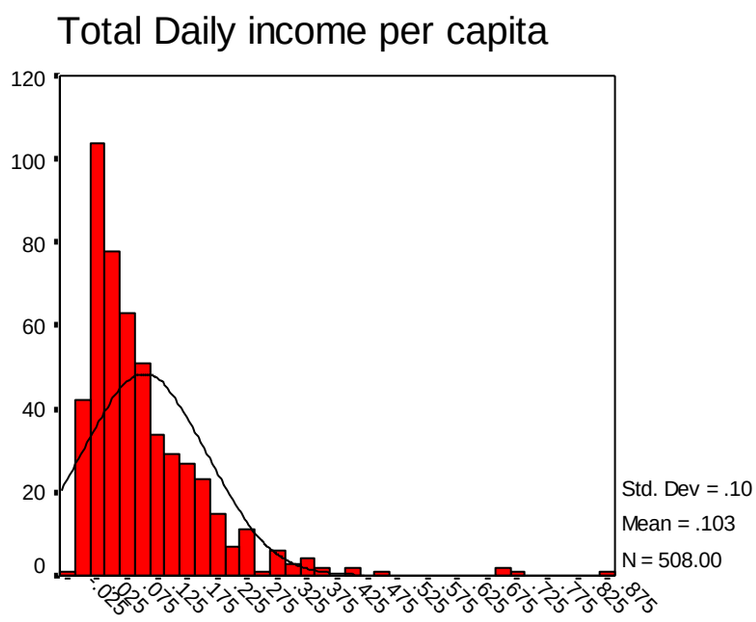
- Daily CASH income/capita
- Daily TOTAL income/capita (including non-cash income and external financial support)

The distribution of the income variables looks as follows:

	0 Riel or less	Less than 500 R	500 < x < 1000 R	1000 < x < 1500 R	1500+ Riel
Daily CASH income/capita	32%	19%	18%	24%	6%
Daily TOTAL income/capita	4%	29%	28%	15%	24%

Daily CASH income generates more than 50% extremely poor, daily TOTAL less than 35%.
Daily cash implies less than 20% very poor, TOTAL cash nearly 30%.
Combined, daily CASH generates 69% LIST scores, daily TOTAL generates 51%.
TOTAL cash seems to differentiate better.





Total Daily income per capita

The actual distributions also suggest that TOTAL cash is a better variable: more normally distributed.

The daily income category also includes employment/occupational considerations. By cross-tabulating both kinds of income with the employment/occupational survey data we can see if they behave similarly or differently:

First we look at pattern of income earning:

Daily cash income per capita by Is the daily work of the main income earner of the HH/Head of the HH, a permanent job, a temporary job, seasonal work or is he or she unemployed? Count

		Is the daily work of the main income earner of the HH/Head of the HH, a permanent job, a temporary job, seasonal work or is he or she unemployed?				**Total**
		Permanent	**Temporary**	**Seasonal**	**Unemployed**	
Daily cash income per capita	**No daily cash income**	16	0	132	13	161
	Less than 500 Riel daily cash income	9	20	46	0	75
	Subtotal < 500 Riel	25	20	178	13	236
	between 500 and 1000 Riel daily cash income	26	17	46	0	89
	More than 1000 Riel daily cash income	69	30	84	0	183
Total		120	67	308	13	508

Total daily income per capita by Is the daily work of the main income earner of the HH/Head of the HH, a permanent job, a temporary job, seasonal work or is he or she unemployed?

		Is the daily work of the main income earner of the HH/Head of the HH, a permanent job, a temporary job, seasonal work or is he or she unemployed?				
		Permanent	**Temporary**	**Seasonal**	**Unemployed**	**Total**
Total daily income per capita	**Daily total per capita income less than 500 Riel**	22	14	138	7	181
	Daily total per capita income between 500 and 1000 Riel	26	25	83	4	138
	Daily total per capita income between 1000 and 1500 Riel	26	13	30	1	70
	Daily total per capita income more than 1500 Riel	46	15	57	1	119
	Subtotal 1000+ Riel	72	28	87	2	189
Total		120	67	308	13	508

Regarding income pattern (permanent, temporary, seasonal or no job) cash and the main difference between CASH income and TOTAL income is that cash income assigns many more HH into the extremely poor category. Many of those that are in extremely poor with CASH income as the criterion end up in the very poor category when TOTAL cash is used (see especially seasonal labor). So the pattern is different but changes are into an adjacent category.

Next we check occupation:

Source of Income by Daily CASH income per capita

		Daily cash income per capita categories				**Total**
		No daily cash income	**Less than 500 Riel daily cash income**	**between 500 and 1000 Riel daily cash income**	**More than 1000 Riel daily cash income**	
Source of Income	**None**	13	0	0	0	13
	Common property resource gathering, foraging	0	1	0	0	1
	Street vendor	1	1	7	16	25
	Waste picking	0	0	0	2	2
	Day labor	1	57	43	85	186
	Agriculture	145	9	15	22	191
	Fishing	0	1	6	8	15
	Herding	0	0	0	1	1
	Moto driver	0	0	1	0	1
	Small or occasional business	1	1	5	9	16
	Established business	0	0	0	2	2
	Construction worker	0	0	3	4	7
	Skilled employment	0	1	8	11	20
	Unskilled emploment	0	3	1	23	27
	Home based labor (sewing, food preparation)	0	1	0	0	1
Total		161	75	89	183	508

Source of Income by TOTAL daily income per capita

		Total daily income per capita categories				Total
		Daily total per capita income less than 500 Riel	**Daily total per capita income between 500 and 1000 Riel**	**Daily total per capita income between 1000 and 1500 Riel**	**Daily total per capita income more than 1500 Riel**	
Source of Income	**None**	7	4	1	1	13
	Common property resource gathering, foraging	1	0	0	0	1
	Street vendor	2	5	11	7	25
	Waste picking	0	0	2	0	2
	Day labor	54	56	31	45	186
	Agriculture	112	47	11	21	191
	Fishing	1	6	2	6	15
	Herding	0	0	0	1	1
	Moto driver	0	1	0	0	1
	Small or occasional business	1	4	2	9	16
	Established business	0	0	1	1	2
	Construction worker	0	3	0	4	7
	Skilled employment	1	10	4	5	20
	Unskilled emploment	2	1	5	19	27
	Home based labor (sewing, food preparation)	0	1	0	0	1
Total		181	138	70	119	508

Regarding the sources of income CASH income has more HH in the extremely poor category with agriculture as their main source of income and fewer in the very poor or the non-listed categories than TOTAL income. The other but smaller difference is with respect to day labor: CASH income has less HH in the very poor and more in the non-listed categories than TOTAL income. To assess the better of the two we look at one more cross tabulation: the two kinds of income crossed with the number of months HHs can eat of their own crops. The tables below show that daily CASH assigns a significantly greater proportion of HH who have more than 6 months to the extremely poor category. This implies that TOTAL cash is a better variable to use.

Both the two tables below and the two tables above show that the source of income variable is no clear cut indicator of poverty. Neither day labor nor any of the other sources of income used in the Village Working Group definition of the INCOME SITUATION correlates well with cash or total income.

On the basis of this we use daily TOTAL per capita income and the numbers of pig/poultry owned as the dataset variables to assign a score to the INCOME SITUATION criterion.

For how many months during the last year did your household have enough rice/other crops to eat? by Daily CASH income per capita

		Daily cash income per capita categories				
		No daily cash income	**Less than 500 Riel daily cash income**	**between 500 and 1000 Riel daily cash income**	**More than 1000 Riel daily cash income**	**Total**
For how many months during the last year did your household have enough rice/other crops to eat?	**0**	0	1	0	0	1
	1	11	4	6	11	32
	2	16	5	11	21	53
	3	15	16	14	22	67
	4	18	8	8	19	53
	5	15	10	9	21	55
	6	11	6	6	24	47
	7	5	3	10	8	26
	8	11	9	8	11	39
	9	7	5	5	8	25
	10	5	4	1	9	19
	11	2	1	1	4	8
	12	45	3	10	25	83
	Subtotal > 6 months	75	25	35	65	224
Total		161	75	89	183	508

For how many months during the last year did your household have enough rice/other crops to eat? by TOTAL daily income per capita

		Total daily income per capita categories				**Total**
		Daily total per capita income less than 500 Riel	**Daily total per capita income between 500 and 1000 Riel**	**Daily total per capita income between 1000 and 1500 Riel**	**Daily total per capita income more than 1500 Riel**	
For how many months during the last year did your household have enough rice/other crops to eat?	**0**	1	0	0	0	1
	1	15	6	4	7	32
	2	25	10	8	10	53
	3	24	20	10	13	67
	4	23	12	10	8	53
	5	15	16	9	15	55
	6	15	11	6	15	47
	7	7	11	3	5	26
	8	17	14	4	4	39
	9	10	7	3	5	25
	10	7	5	2	5	19
	11	2	1	1	4	8
	12	20	25	10	28	83
Subtotal > 6 months		63	63	23	51	200
Total		181	138	70	119	508

Annex 7. Overview of living standards as commonly described in the literature

For Cambodia, a lot of research and development practitioner thinking has gone into the description of what are the characteristics of living standards. All of these descriptions are multi-dimensional, referring to (more or less of) the various aspects that are widely understood to be indicating poverty or wealth. This annex describes what this implies for efforts to define (levels of) poverty at HH level, e.g. to determine a HH eligibility for and Health Equity Fund, a scholarship fund, or other social transfers.

In technical jargon, poverty is like an unobservable or hard to observe 'variable' that can only be approximated using an aggregate of variables that indicate these various aspects, each appropriately weighted for their relative importance. Again, in technical jargon, one needs a 'proxy-means' approach to establish a HH poverty level.

Unfortunately, even in a well-developed research field like living standards measurement there is some terminological confusion. Some differentiate between 'direct' and 'indirect' measurements of standard of living. They call income and expenditure 'direct' measurements and refer to indices constructed from data on HH assets and other characteristics as 'indirect' or 'proxy' measures. Others argue that expenditure (let alone income) data are so difficult if not impossible to collect reliably in developing countries that any sensible approach to measure poverty at HH level has to be an aggregate 'proxy-means' measure. Especially because HH vulnerability cannot be established without taking much more into account than (claims on) the consumption of goods and services. These measures then often include both direct and indirect indicators of wealth.

Obviously, the most extreme forms of poverty are hardly difficult to observe. A HH lacking in all aspects, being disadvantaged in every imaginable sense, can be identified without any 'arbitrary' decisions involved. However, most HH that common sense would identify as poor are not disadvantaged in all respects. They 'score' poor on some but not all possible aspects of poverty.

Thus, the question becomes one of establishing the relative importance of the various aspects and the break-off points for different classes/levels when one aggregates across aspects.

And to the extent that poverty identification needs to be practically feasible – i.e. low-cost, based on a minimum number of 'easy' to score/identify indicators/variables – the question becomes one of the 'best' or most discriminating aspects.

Descriptions of poverty levels in Cambodia

This section describes various efforts to describe the socioeconomic stratification of rural lowland Khmer villages. It illustrates similarities and differences, the problems identified and not yet solved and the limitations of current classification schemes.

This is not to devalue the work of these pioneers, but to acknowledge their contribution and argue for more evidence-based efforts to improve the current semi-informed, non-standardized state of affairs. We believe this is in line with the efforts of the Ministry of Planning and GTZ.

The three poverty profiles (1993/94, 1997, 1999) preceding the one currently being prepared (CSES 2004) are considered hampered by various technical problems (any survey is but that is another matter) but are quite consistent regarding some basic demographic characteristics of poor HH[36]:

- Poverty increases with HH size and with the number of children in the HH and is highest in HH headed by a middle-aged person
- Poverty rates are highest among HH in which the head of the HH is working primarily in the agricultural sector
- There is no significant difference in absolute poverty rates according to the sex of the head of HH
- Poverty rates differ little between HH headed by a person with no schooling compared to primary schooling only (or between HH with literate and illiterate heads), but poverty rates are significantly lower in HH headed by a person with secondary, vocational/technical or higher education

The best qualitative research on poverty is the 2001 ADB Participatory poverty assessment (PPA) in Cambodia (field work in 2000). The results of this study and the CSESs data are reasonably consistent regarding determinants of poverty:

Correlates of poverty[37]
"PPA findings suggest that rural poverty is caused/characterized mainly by lack of access to more than 2 hectares of good quality land, to at least two draft animals and necessary farm implements, to excessive reliance on rice cultivation as a source of income, to the effects of natural catastrophes and serious illness, to a high household dependency burden (i.e. many small children but with only one or a few income earners), and to chronic indebtedness and the inability to borrow additional money when needed. Urban poverty is caused by irregular employment, involvement in illegal activities, chronic illness (e.g. TB or AIDS), and substance abuse (alcohol or drugs). Most PPA findings are consistent with the survey findings. However, there are a few exceptions. For example, the PPA emphasizes the importance of livestock ownership as a factor related to poverty, whereas the survey data do not find any relationship between livestock ownership and poverty, even within rural areas".

The table below gives the overview disaggregated for the six levels of standards of living described for rural Khmer lowland villages

[36] ADB (May 2003) Poverty Analysis Draft – Executive Summary, p.8.
[37] ADB (2003), p.9

ADB Participatory Poverty Assessment 2001: Characteristics of the six socioeconomic strata in rural lowland (non-fishing) Khmer villages

	Productive land	**Draft animals & farm implements**	**Household utensils**	**Transport assets**	**Housing**	**Food security**	**Source of income**	**Debt/saving**	**Kinship support**	**Dependency ratio**
Poorest HH Kror Toal	Little or no land (2-3 acres)	Max one draft animal; no farming implements	Few Household Utensils		Thatch housing in very poor condition	Food-shortage for up to 8 months/year	Much reliance on natural resources for subsistence	Accumulated debt and inability to repay or borrow additional	No Kinship support	Large young families with 5-12 children
Poor HH Kror (thomada)	Less than 2 ha. of and in unfavorable locations	At least two draft animals and some farm implements	Limited number of household utensils		Thatch houses, sometimes with tile roofs and bamboo walls	Food shortages for 4-6 months/year		Able to borrow money for rice farming		
Lower medium income HH Kror imom/kandal	Less than 3 ha.	Draft animals and farm implements	Limited number of household utensils		Houses made of wood or bamboo, thatched roofs and walls and tile roofs	Food shortages for 3-6 months/year		Able to borrow money for rice farming		
Middle income HH Mathyum, imom, krubkroan, kandal	Up to 6 ha.	2-4 draft animals, some livestock and all farm implements	Reasonable number of household utensils	Old motorbike or boat	Houses made of wood with either bamboo or wooden floors and tile roofs	No food shortage except when major crisis or ritual	Small-scale business	Limited cash savings		
Not poor Thouthear Neak leu Kroan beu	More than 1 ha. of very productive land	At least 2 draft anmals ad many other livestock and farm implements	Well-furnished HH, often with TV		Houses made of permament building materials, incl. corrugated iron and tiles	Full food security with limited surplus for lending, sale or labor exchange		Able and willing to lend money to other villagers		

From the table, irrespective of the particular characteristics used, it is already evident that identifying the poorest and the richest strata is not the heart of the problem. What is not easy is to draw the lines in the broad middle category. When exactly is one out of the 'danger' zone??

This issue is also reflected in the terminology. One can argue that the table above identifies three 'categories' of poor. The lower medium income category is definitely in the danger zone because they are still unable to adequately cushion themselves against (major) setbacks like illness. So others would label all three categories as poor: the extremely poor or destitute (kroh toal), the very poor (kroh krey) and the poor (kroh)[38].

Another issue is the characteristics mentioned by the villagers to describe the various socioeconomic strata. A big advantage of the above list over other lists is the large number of poor villagers who were involved in generating it.

However, one has to point out that it does not totally overlap with other efforts to list the (most) important characteristics that differentiate between socioeconomic strata. The rest of this paragraph is devoted to a couple of these other lists.

CDRI/UNRISD conducted a food security study in 1998[39] that used a transparent and well-argued methodology to socioeconomic stratification. The study used a preliminary list 15 indicators:

- Land ownership *
- Value of animal assets *
- Ownership of durable goods, transportation, equipment, machinery *
- Other assets, e.g. shops, rice mills, etc.
- Rice production – the degree of surplus or deficit
- Regularity of income and employment
- Visual impression of housing conditions (state of repair, size, construction materials) *
- Visual impression of material conditions (clothes, furniture, utensils) *
- Visual impression of health conditions
- Number of adult income earners and number of dependents *
- Paddy rice stocks (number of months of consumption) *
- Consumption loans, tied credit, state of indebtedness *
- Migration
- Hiring or selling of labor
- Educational level of members

The characteristics that overlap with ADB are indicated with an *

The study found a high degree of co-linearity between variables and managed to reduce the 15 to 5 basic variables, all part of the ADB list:

- Land ownership, adjusted for productivity
- Ownership of transportation, machinery and consumer durables
- Animal assets
- Housing conditions
- Family labor (ratio people aged > 16 to dependents – children and elderly)

The study constructed six strata:

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[38] Overtoom, R. (December 2003) Report on possibilities for equity funds. URC, p.9.
[39] Murshid, K. (1998) Food security in an Asian transitional economy: the Cambodian experience. CDRI/UNRISD

- Rich
- Well off
- Marginal positive
- Marginal negative
- Poor
- Very poor

But concludes that differentiating between especially the two marginal groups is very difficult and suggesting that they are probably best combined. This would bring this classification into line with the above described 5 strata classification with three poor strata and two non-poor strata.

The study used the following criteria to define the strata in terms of the basic characteristics:

	Very poor	**Poor**	**Marginal negative**	**Marginal positive**	**Well off**	**Rich**
Land, irrigated and non-irrigated areas	< 0.02 ha./capita < 0.04 ha./capita	0.03-0.06 ha./capita 0.06-0.12 ha./capita	0.075-0.9 ha./capita 0.15-0.18 ha./capita	0.10 ha./capita 0.20 ha./capita	0.20 ha./capita 0.40 ha./capita	0.30 ha./capita 0.60 ha./capita
Animal assets **$ 1 = 2,700 Riel**	< 10,000 R.	10,000-50,000 R.	50,000-400.000 R.	400,000-900,000 R.	900,000-1.75 million R.	> 1.75 million R.
Machinery and durables	< 50,000 R.	50,000-150,000 R. exemplified by a bicycle or boat, battery or radio	150,000-500,000 R. bicycle plus a battery, plough, radio, etc.	500,000-1 million R. irrigation pump, oxcart or boat with engine, plus TV, bicycle, battery, plough, etc.	1 million-7 million R. motorcycle, rice mill or bat with engine, irrigation pump, TV, radio cassette player, etc.	> 7 million R. tractor, motorcycle, oxcart, rice mill, TV, etc.
Housing	Old and run-down house and precarious living conditions	Old dilapidated house	House size: 4x5 mtr, with thatch roof and bamboo or thatch walls (300,000-500,000 R.)	House size: 4x6 mtr with thatch roof and bamboo or thatch walls (500,000-1 million R.)	House size 4x7 mtr with zinc or thatch roof and bamboo walls (3-5 million R.)	House size: 6-8mtr with tile roof and wooden walls (6 million R.)
Labor supply Benchmark level 1:2	> 5 extra dependents	3-5 extra dependents	< 3 extra dependents	Sufficient labor availability	At least 1 extra over and above benchmark level	All HH members are earners, no dependents

"Explicit weights were *not* used to add up or combine the variables-this was deliberately left non-explicit and made a function of the overall assessment of the field researchers, key respondents and co-villagers as well as the respondents themselves. As more and more village studies are conducted, an a better idea is formed about the process of rural stratification in Cambodia, it ma be possible to assign weights, but for the tie being this is probably inadvisable".(p.65)

A 2002 review of mechanisms to improve equity in access to health care[40] assessed alternative approaches to identifying the poor and came up with a suggested list of criteria to be used for establishing eligibility for rural HH:

Demographic

1. Orphan and Abandoned children under 15 years of age (Child lives in a state, NGO orphanage or nutrition centre.)
2. Number of children in family under 14 years of age (5 or more)
3. Age over 60 years.
4. Disabled (war/non war disability)
5. Mine / UXO injury (old or new injury)
6. Demobilized soldier (male/female with ID card)
7. Prisoner (male, female or child)
8. Street child (peri-urban)
9. Street family (peri-urban)
10. Monk or Nun

Land

11. Landless (no chamkar nor rice land)
12. Resettlement or Settlement land (during past 5 years)

Housing Characteristics

13. House walls and/or roof made of plastic/ cloth
14. No electricity
15. Temporary shelter in a Buddhist Wat
16. House plot has severe seasonal flooding

Health

17. Number of pregnancy (5 or more)
18. Immunization coverage child (no booster)
19. Immunization coverage maternal (none or no booster tetanus)
20. Chronic illness (as defined: e.g. leprosy)
21. Communicable Disease (Fulminatory)
22. Mine/UXO injury (old or new injury)
23. Pregnancy:
24. Eclampsia (at any period during pregnancy and delivery)
25. Placenta praevia
26. Obstructed Delivery
27. Multiple births
28. Water Sanitation
29. Limited year round access to potable water (1+ kilometers to water source)
30. No access to a family toilet

Transportation

31. No transportation (No bicycle/motorbike/ox or horse cart/boat)
32. Distance in km to nearest Commune Health Centre (5+ kilometers)
33. Distance in km to nearest year round road (1+ kilometers

[40] Crossland, A. & Conway, T, (July 2002). DFID Health Systems Resource Centre

Occupation

34. Labor on other peoples agriculture/rice land
35. Male Head of Household migrates to other areas for work. (Include seasonal migration
36. Female Head of Household migrates to other areas for work (includes seasonal migration)
37. Family adults unemployed looking for work.

Finance

38. Family adult members not eligible to apply for credit.
39. Family is paying back credit debt (Collateral used: land/house paper/title)

A specific example is a HEF fund categorization used in Sotnikum[41]:

Categ./ Classes	Socio-economical distinction factors		Characteristics of the socio- economical classes		
	Assets	**Advance or debt**	**Activity**	**Rice stock (shortage & surplus)**	**Earner/dependant**
Rich	Savings invested in: • Jewels, gold • Land • Rice mill, tractor, taxi-car, moto… • TV, generator, … • Cattle & livestock (pig, goat, chicken)	Give loan or advance paddy and money to others Can borrow money (with low interest rate) from banks to expand but covered by assets/product°	• Trader • Farmer • High-ranked military, police and civil servants	No shortage Always have surplus	Can employ at least 2 permanent workers + seasonal daily workers Able to send all children to school
Medium or Better Off	Savings invested in: • Few jewels, a bit of gold • Moto, bicycle, ox cart … • Draft animal • TV, batteries, … • Livestock and cattle (pig, goat, chicken…)	Debt ≤ 500 USD (with low interest rate) for: • Buy land/assets to expand • Labour payment (Rainy season) • Emergency cases	• Farmer • Fisherman • Trader • Motodop driver • Private practitioners • Mid-ranked military, police and civil servants	No shortage Little surplus	Can employ 1 permanent worker and seasonal daily workers Able to send all children to school
Poor	No saving, no investment • Old bicycle • 0-1 draft animal • 0-2 cattle • Borrow ox cart and draft animal from richer people • Chicken and ducks • Manpower	Debt = 100-200 USD (depending on their assets) with medium-high interest rates • Emergency cases • Special events • Food • Fertiliser + small cash from richer people	• Farmer • Odd job • Construct° work… • Fisherman • Bamboo, wood • Petty-trader & mobile shops	Shortage less than 3 months (Oct to Dec) Small surplus in Jan/Feb	≤ 2 earners for 3 dependants within the household Able to send 50% max of children to school
Very poor	No saving, no investment • No or just a few Chicken, ducks • Manpower	Debt = Few kg of rice or manpower or small money (with high interest rate)	• Farmers • Odd job • Construct° work… • Fisherman • Bamboo, wood • Petty-trader & mobile shops	Shortage more than 6 months (July-Dec) 0 -10 days stock	≤ 1 earner for 4 dependants within the household Unable to send children to school (or 1 max)

- Rich tend to accumulate more and more wealth as they make their assets profitable (rent of cattle and land, loan of paddy or cash), then reinvest in new productive and non-productive assets (jewels/gold, land, cattle, livestock, etc.) and finally invest in other activities (trading). Rich are quite rare in remote areas, they live near market/trade areas.

[41] The authors acknowledge the input provided by Ir Por currently BTC Siem Riep) who provided this description.

- Medium/Better Off are more or less "stable", as they are almost sufficient for their food consumption and health care expenditures. They only acquire a few debts to solve little deficit they can have, but which they are able to reimburse relatively rapidly.

- Poor depend on rich farmers to meet their food needs. Poor, because of the (often) high level of interest rate, cannot improve their situation. Odd job worker have precarious incomes from the farm or self-employed jobs, which are coping mechanisms that maintain them more or less in a day-to-day subsistence. They are constantly on the edge, and any external constraints tend to send them into critical health-economic insecurity.

- The distinction between poor and very poor categories is difficult to establish. The very poor are the ones who cannot meet their needs regarding their daily food and health expenditures. However, most of the poor households face this problem at some point during the year. In most of the cases, this is due to an unbalanced ratio of earners to dependants, but it also depends on daily wages offered, season, working and non-working assets, etc. In fact, these two categories are inter-connected and households move from one to another during the year, according to a combination of circumstances.

The last example is a list of criteria established by DOLA/WB/ADB in discussions with commune councils and village leaders[42]:

General criteria
- Landless – or no land for farming *
- Widows
- Elderly HH
- Single parent HH with children
- Main breadwinner(s) is continually ill
- Large number of children *

Housing conditions
- Walls made of bamboo or palm leaf *
- Roof made of palm leaf *
- Poor sanitary condition around house/no latrine
- No water source available to HH
- Very small plot *

Assets
- No transportation (no cart, motorbike, bicycle, etc.) *
- No livestock (buffaloes, cows, pigs, etc) *
- No TV in the house *
- No/few mosquito nets *
- No electricity
- No well in yard of house
- Not enough food to feed the family *
- No/little – How much land do they have?

Access to economic assets
- No regular job *
- Low HH income (# of people working/total HH daily income)
- Are the children < 16 attending school or working?
- No savings to support family in crisis periods *
- In debt to others – to buy food and basic necessities (only) check why? *

[42] Lanjouw, S. (February 2004) A model for identification and targeting social transfers to the poor: a design and costing analysis for Kampong Thom province. GTZ

Access to social assets

- Head of HH illiterate
- Adult members of HH illiterate
- Number of children attending school
- No work undertaken due to frequent illness

The criteria that are also part of the ADB list are marked with an *

The proxy-means approach

The first issue to be addressed here is: does it really matter what living standard measure of uses? The short answer to that is: yes it does. In many contexts the correlation between consumption and assets and other household characteristics are weak[43]. Sometimes, this does not matter when one analyzes relationships between HH living standard and other variables, e.g. a health indicator like stunting; in this case that would mean that using different poverty measures that are only weakly correlated results in very similar macro-relationships between poverty and stunting. However, sometimes, the choice of measure for socioeconomic status *does* have an impact on the findings of one's analysis. In other words, one does have to be careful with drawing conclusions on the basis of measures.

The box below describes the primary approaches to constructing welfare indices that do not include income and/or expenditure data.

The primary approaches to constructing welfare indices[44]

" **'Arbitrary approach':** Some studies have used what may be referred to as 'naïve' indices to proxy or control for living standards, often constructed as the sum of indicator or dummy variables for whether a household possesses certain assets…

Principle components and factor analysis: As an alternative to a simple sum of asset variables that are available in the data, it is possible to use statistical techniques to determine the weights in the index. The two most common approaches for doing this is principle components analysis and factor analysis. These are essentially tools for summarizing variability among a set of variables…Principle components analysis suffers from an underlying lack of theory to motivate either the choice of variables or the appropriateness of the weights.

Predicting consumption: In cases where complementary consumption data are available…it may be possible to derive weights for a living standard index through a 'consumption regression'. In other words, consumption data are regressed on a set of household assets and characteristics…and coefficient estimates are used as weights. This approach draws on the techniques from the targeting literature, which seeks to identify a set of variables that predict consumption. Consumption regressions have also been implemented in other contexts, e.g. to link survey and census data for the purposes of poverty mapping. In many cases, the estimated models have considerable predictive power. However, in both cases, the set of household and asset characteristics has been broader than has typically been the case for assets constructed through principle components or factor analysis, including for example, educational status, language, location, and ethnic affiliation. In other words, many of the attempts to predict consumption have included not only *indicators* and *determinants* of income and consumption".

The principles of the first two approaches do not change when one constructs indices that include both consumption and 'proxy' variables. The third approach obviously combines the two in another way.

Cambodian data have hardly ever been used as a basis for anything other than the arbitrary approach. The GTZ facilitated process of harmonizing poverty identification mechanisms and

[43] Quantitative techniques for health equity analysis – Technical Note # 4, p.9-10. December 2005 available at http://siteresources.worldbank.org/INTPAH/Resources/Publications/Quantitative-Techniques/health_eq_tn04.pdf

[44] Quantitative techniques for health equity analysis – Technical Note # 4, p.3.

approaches has not yet included the statistical exploration of the Cambodian Socio-Economic Survey (CSES) data along the lines described in the box. This is expected to happen in the near future.

The only statistical application we are aware of is a weighted index for selecting scholarship children that has been developed for the WB ……program. This index is based on a multivariate analysis of the 1999 CSES, the 2000 Demographic and Health Survey (DHS) and 2001 Cambodia Child Labor Survey (CCLS) data.

All other poverty (pre-)identification/targeting applications to date have used the 'naïve', 'arbitrary' approach.

We agree that the 'arbitrary' approach is aptly labeled in that there is no evidence base for the weights used. More often than not the weights are adjusted so as to result in a feasible and/or aimed for proportion of the population. In that sense, the statistical techniques described above are definitely a step towards evidence-based policy and practice. However, as the box explicitly says, statistics in itself does not make up for lack in theory.

But in our opinion, it is only a step. The multidimensionality of poverty – indicated by the usual low correlations between different aspects of it (see above: consumption and assets) – may actually require other analytic approaches than the mainstream quantitative techniques. The customary assumptions underlying these quantitative approaches have obvious limitations when applied to multi-dimensional phenomena. The basic assumption is that the best way to identify and understand a regularity/pattern in a large quantity of information is to look for the *one best summary description* of that pattern. E.g. what a regression analysis identifies is the effect that a particular independent variable has on the variance of a dependent variable. That effect, be it a 'net' effect (i.e. the impact of other independent variables that correlate with the one that one is interested in has been eliminated already) or not, is an 'average' effect. It is the average across all kinds of combinations of that independent variable with other relevant independent variables.

The search for the one best summary description assumes that for each particular outcome – e.g. poverty – there is one pattern of independent (and possibly intermediary) variables that is the most general and parsimonious explanation for what 'causes' it. And that pattern is what the statistical techniques are aiming to extract from the data.

This debatable assumption is at the heart of the methodological mainstream. Alternatives that operate on the assumption that *various different* patterns of independent variables can result in the same dependent variable outcome exist, e.g. QCA and its more recent fuzzy extension[45], but have, to our knowledge, not yet been applied to this kind of analysis, not in Cambodia, but also not elsewhere.

The big advantage of 'allowing for' multiple causal combinations is that the explanatory power of each *combination* of independent variables is bound to be larger than the explanatory power of knowing the relative importance of *single* independent variables. It is interesting and policy relevant to know if e.g. quality of housing, land holding, the household labor supply/dependency ratio, or transportation assets is on average the most important indicator of poverty. But it would be even more informative if we could show that a high dependency ratio in combination with low quality of housing is a reliable indicator of poverty when the household does own some land but does not so for landless households. This is a fictitious and improbable example, but it is well-known that some combinations of poverty aspects are much more certain to indicate poverty than other combinations. The 'average' weights of the mainstream statistical techniques are not necessarily the optimal solution to correctly identifying these combinations.

[45] On QCA see e.g Ragin, C. (1994) *Constructing social Research*. Thousand Oaks: Pine Forge Press; on the fuzzy extension, see Ragin, C. (2000) *Fuzzy-set social science*. Chicago: UoC Press

However, we don't know as long as we have not explored. With both 2004 CSES and soon new DHS data available, both the mainstream co-variation and the comparative approach can be applied to recent and allegedly robust nationally representative datasets.

It may seem presumptuous but we decided to include the below basic reminder on different ways one can approach the project of systematic understanding social reality. Unfortunately methodology is an undervalued aspect of the research enterprise, an aspect mostly left to those moving in the fringes, assumed to be taken care of by the technicians of methodology departments, the part of the presentation to be skipped first, etc. However, as with evidence/data, for methodology, garbage in = garbage out. Our approaches can only give us what they are designed to do, and each approach is designed to do deliver answers to only some kind of questions, not others. When we try to answer a question using an inappropriate methodological approach, the answer, however impressive the data, is indeed going to be garbage[46].

Qualitative, Quantitative and Comparative research[47]

"Qualitative researchers believe that in order to represent subjects properly, they must be studied in depth – to uncover nuances and subtleties. Comparative researchers lie halfway in between on the issues of parsimony and generality. Rather than focus on patterns that are general across as many cases as possible – the primary concern of the quantitative approach, comparative researchers focus on diversity, on configurations of similarities and differences within a specific set of cases. This difference between quantitative and comparative research is subtle but important. A parsimonious image that links attributes across many cases assumes that all cases are more r less the same in how they came to be the way they are. The person with low education and low income is, in this view, the reverse image of the person with high education and high income. They are two sides of a single coin.

The comparative approach, by contrast, focuses on diversity – how different causes combine in complex and sometimes contradictory ways to produce different outcomes. Thus, instead of focusing on attributes that co-vary with differences in income levels, like educational levels, the comparative researcher might focus on the diverse ways people achieve material success, with and without education, and contrast these with the diverse ways they fail to achieve success. From a comparative perspective, it is not a question of which attributes co-vary most closely with income levels, but of the different paths to achieving material success.

[46] Many questions cannot be fully answered by any methodological approach on its own, but need input for various angles. This is not the place to complicate matters even more…

[47] Ragin (1994), p.137-138

Annex 8. Overview of poverty identification schemes, criteria, weights

POVERTY IDENTIFICATION MODELS				
CRITERIA CATEGORIES	**CRITERIA**	**SUB-CRITERIA**	**GTZ Kampong Thom Rural**	**CFDS Monkul Borey**
LAND	Land under cultivation	Size	0 = > 2ha	0 = > 3 ha.
			1 = 0.2 - 2 ha	1 = 1-3 ha.
			2 = None	2 = < 1 ha.
				3 = none
		Arrangement		
	Quality of land	Overall assessment		
		Irrigated/non-irrigated		
	Fish pond			
	Resident land: see assets			
ANIMALS	Cow/Buffalo/Horse	Number	see below	
		Arrangement		
	Pig/goat/sheep	Number	see below	
		Arrangement		
	Poultry	Number	see below	
		Arrangement		
	Total animals	Number	0 = more animals	0 = >5
			1 = 1 or 1 pig or 6-20 poultry	1 = 3-5
			2 = none or max 5 poultry	2 = 1-2
				3 = none
		Value		

ASSETS	Resident land	**Arrangement**		
		Size	0 = > 0.02	
			1 = < 0.02	
			2 = none	
		Value		
	Transportation		0 = both/motorized	0 = vehicle
			1 = bicycle/oxcart	1 - motorbike
			2 = none	2 = bicycle/oxcart/boat
				3 = none
	farming equipment			see transportation
	Other equipment			
	Media equipment		0 = TV or other	
			1 = radio	
			2 = none	
	Other valuables			
	Stocks all			
	Total asset value			
	Productive assets			
	Stocks above 100,000			
	Debts (negative assets)	Freq. of indebtedness		0 = never
				1 = seldom
				2 = often
				3 = always
		Outstanding debt		
		Collateral		

HOUSING	House type	Overall assessment	0 = wood/brick	0 = concrete
			1 = thatch	1 = wood
			2 = none	2 = thatch
				3 = none
		Size		
		Roof Assessment		
		Wall assessment		
		Floor assessment		
		Flooding		
ELECTRICITY/LIGHTING				
INCOME	Monthly per capita income	Cash income		
		Non-cash income		
	Time unit of expenditure			
	External Assistance	Frequency		0 = yes, always
				1 = yes, sometimes
				2 = yes, once in a while
				3 = never
		Size		

EXPENDITURE	Monthly HH expenditure			
	Monthly per capita expenditure			
	Yearly HH health costs			
	Income/Expenditure ratio			0 = exp < income
				1 = exp = income
				2 = exp > inc
				3 = exp >> income
	Crises expenditure			
OCCUPATION	Main occupation Head		0 = established business, produce palm wine/sugar	
			1 = small business, 3+ wage labor	
			2 = 1-2 wage labor, common property resource gathering	
	Occupational pattern			0 = permanent job
				1 = temporary job
				2 = seasonal job
				3 = unemployed/none

HEALTH & OTHER CRISES	Health of Head			0 = never sick
				1 = seldom sick
				2 = often sick
				3 = always sick
	Nr. of chronically ill members			
	Nr. of disabled members			
	Length of severe illness last yr.			
	Health costs (see expenditure)			
	Susceptibility to disaster	Freq. of crises		0 = never a crisis
				1 = seldom a crisis
				2 = often a crisis
				3 = always a crisis
		Kinds of crises		
	Crises costs (see expenditure)			
EDUCATION	Literacy all members			
	Highest level education Head			0 = higher
				1 = secondary
				2 = primary
				3 = none
FOOD SECURITY/HUNGER	Rice/months per year		0 = > 8 months	
			1 = 6-8 months	
			2 = < 6 months	
	Hunger last 3 months			
	Rice porridge last 3 months			

HOUSEHOLD CHARACTERISTICS	Family Size			0 = I member
				1 = 2-3 members
				2 = 4-5 members
				3 = > 5 members
	Dependency ratio/labor supply			
	Number of income earners			
	Specific family conditions	Elderly		
		Orphan		
		Children		
		Head is widow/single		
		Widow/er with children		
		Single and seriously ill		
		Single mother with small child		
	Sex of all HH members			
	Relationship HH member to head			
	Age all HH members			
	Marital status all HH members			
	HH members in school			
	HH member working daily			
POVERTY CLASSIFICATION	VERY/EXTREMELY POOR		> 9	26-36
	POOR			17-25
	MARGINAL -	Medium poor		
	MARGINAL +			
	WELL OFF	Not poor	< 10	< 17
	RICH			
RANGE OF AGGREGATE SCORE			0-16	0-36

POVERTY IDENTIFICATION MODELS				
CRITERIA CATEGORIES	**CRITERIA**	**SUB-CRITERIA**	**CFDS Sompou Meas**	**AFH Mung Russey** **AFH Chlong**
LAND	Land under cultivation	Size	0 = > 3 ha.	0 = none
			1 = 1-3 ha.	1 = < 1 ha.
			2 = < 1 ha.	2 = 1-2 ha.
			3 = none	3 = 2-5 ha.
				4 = > 5 ha.
		Arrangement		
	Quality of land	Overall assessment		2 = first category
				1 = second category
				0 = third category
		Irrigated/non-irrigated		
	Fish pond			
	Resident land: see assets			
ANIMALS	Cow/Buffalo/Horse	Number		
		Arrangement		
	Pig/goat/sheep	Number		0 = none
				1 = 1 adult pig or < 30 chickens/ducks
				2 = 2 adult pigs or > 30 chickens/ducks
				3 = > 2 of pigs/sheep/goats
				4 = > 2 oxen/fish farm
		Arrangement		
	Poultry	Number		
		Arrangement		
	Total animals	Number	0 = >5	
			1 = 3-5	
			2 = 1-2	
			3 = none	
		Value		

ASSETS	Resident land	**Arrangement**		
		Size		
		Value		
	Transportation		0 = vehicle	0 = none/bicycle/small boat
			1 - motorbike	1 = horse/oxcart
			2 = bicycle/oxcart/boat	2 = motorbike/boat/lorry
			3 = none	3 = vehicle/tractor
				4 = more than 2 (2&3)
	farming equipment		see transportation	0 = no cow or buffalo
				1 = 1-2 cows/horses
				2 = water pump
				3 = tractor/"iron buffalo"
				4 = 2 of any of 3 & 4
	Other equipment			
	Media equipment			0 = none/radio
				1 = tape/B-W TV
				2 = Color TV
				3 = Mobile/ICOM Radio
	Other valuables			
	Stocks all			
	Total asset value			
	Productive assets			
	Stocks above 100,000			
	Debts (negative assets)	Freq. of indebtedness	0 = never	
			1 = seldom	
			2 = often	
			3 = always	
		Outstanding debt		
		Collateral		

HOUSING	House type	Overall assessment	0 = concrete	0 = worst
			1 = wood	1 = good
			2 = thatch	2 = best
			3 = none	
		Size		
		Roof Assessment		0 = thatch/leaves/tent
				1 = tiles/zinc/sheet
		Wall assessment		0 = none/leave/bamboo
				1 = wood
				2 = cement
		Floor assessment		0 = none
				1 = bamboo
				2 = wood
				3 = cement/tile
		Flooding		
ELECTRICITY/LIGHTING				0 = none
				1 = battery < 50 Amp
				2 = Electricity
				3 = generator
INCOME	Monthly per capita income	Cash income		0 = < 15,000 R.
				1 = 15,000 - 30,000 R.
				2 = 30,000 - 60,000 R.
				3 = 60,000 - 120,000 R.
				4 = > 120,000 R.
		Non-cash income		
	Time unit of expenditure			
	External Assistance	Frequency	0 = yes, always	
			1 = yes, sometimes	
			2 = yes, once in a while	
			3 = never	
		Size		

EXPENDITURE	Monthly HH expenditure			
	Monthly per capita expenditure			
	Yearly HH health costs			0 = >500,000 R.
				1 = 200,000 - 500,000 R.
				2 = < 200,000 R.
	Income/Expenditure ratio		0 = exp < income	
			1 = exp = income	
			2 = exp > inc	
			3 = exp >> income	
	Crises expenditure			
OCCUPATION	Main occupation Head			
	Occupational pattern		0 = permanent job	
			1 = temporary job	
			2 = seasonal job	
			3 = unemployed/none	

HEALTH & OTHER CRISES	Health of Head		0 = never sick	
			1 = seldom sick	
			2 = often sick	
			3 = always sick	
	Nr. of chronically ill members			
	Nr. of disabled members			(see eldery)
	Length of severe illness last yr.			0 = > 30 days
				1 = 15-30 days
				2 = 5 -15 days
				3 = < 5 days
	Health costs (see expenditure)			
	Susceptibility to disaster	Freq. of crises	0 = never a crisis	
			1 = seldom a crisis	
			2 = often a crisis	
			3 = always a crisis	
		Kinds of crises		
	Crises costs (see expenditure)			
EDUCATION	Literacy all members			
	Highest level education Head		0 = higher	
			1 = secondary	
			2 = primary	
			3 = none	
FOOD SECURITY/HUNGER	Rice/months per year			
	Hunger last 3 months			
	Rice porridge last 3 months			

HOUSEHOLD CHARACTERISTICS	Family Size		0 = I member	
			1 = 2-3 members	
			2 = 4-5 members	
			3 = > 5 members	
	Dependency ratio/labor supply			
	Number of income earners			
	Specific family conditions	Elderly		0 = > 2 of elderly/orphans/disabled
				1 = 1 elderly/orphan/disabled
				2 = no elderly/orphan/disabled
		Orphan		(see elderly)
		Children		
		Head is widow/single		
		Widow/er with children		
		Single and seriously ill		
		Single mother with small child		
	Sex of all HH members			
	Relationship HH member to head			
	Age all HH members			
	Marital status all HH members			
	HH members in school			
	HH member working daily			
POVERTY CLASSIFICATION	VERY/EXTREMELY POOR		28-36	< 6
	POOR			6-9
	MARGINAL -	Medium poor	18-27	10-13
	MARGINAL +			
	WELL OFF	Not poor	< 18	> 13
	RICH			
RANGE OF AGGREGATE SCORE			0 – 36	0 – 43

POVERTY IDENTIFICATION MODELS				
CRITERIA CATEGORIES	**CRITERIA**	**SUB-CRITERIA**	**Kirivong OD**	**UNICEF Svay Rieng**
LAND	Land under cultivation	Size	0 = > 0.5 ha.	0 = > 2 ha.
				1 = 1-2 ha.
				2 = < 1 ha.
			3 = < 0.49 ha.	3 = none
		Arrangement		
	Quality of land	Overall assessment		
		Irrigated/non-irrigated		
	Fish pond			
	Resident land: see assets			
ANIMALS	Cow/Buffalo/Horse	Number	1 = no cow or pig	0 = > 2
			0 = any livestock	1 = 1-2
				2 = none
		Arrangement		
	Pig/goat/sheep	Number		0 = 2-3
				1 = 1
				2 = none
		Arrangement		
	Poultry	Number		
		Arrangement		
	Total animals	Number		
		Value		

ASSETS	Resident land	**Arrangement**		
		Size		
		Value		
	Transportation		0 = motorized	0 = motorbike
			1 = none/bicycle/small boat	1 = bicycle/oxcart
				2 = none
	farming equipment		Or	See transport
	Other equipment			
	Media equipment		0 = luxury assets	
			1 = none/radio	
	Other valuables			
	Stocks all			
	Total asset value			
	Productive assets			
	Stocks above 100,000			
	Debts (negative assets)	Freq. of indebtedness		
		Outstanding debt		
		Collateral		

HOUSING	House type	Overall assessment	0 = other	0 = wood or cement
			3 = worst	2 = thatch, leaves, clay
		Size		
		Roof Assessment		
		Wall assessment		
		Floor assessment		
		Flooding		
ELECTRICITY/LIGHTING				
INCOME	Monthly per capita income	**Cash income**	.	
	Monthly HH income		0 = > 120,000 R	
			3 = < 121,000 R.	
		Non-cash income		
	Time unit of expenditure			
	External Assistance	Frequency		
		Size		

EXPENDITURE	Monthly HH expenditure			
	Monthly per capita expenditure			
	Yearly HH health costs			
	Income/Expenditure ratio			
	Crises expenditure			
OCCUPATION	Main occupation Head			
	Occupational pattern			0 = yes, regular
				1 = yes, rarely/irregular
				2 = none

HEALTH & OTHER CRISES	Health of Head			
	Nr. of chronically ill members			
	Nr. of disabled members			
	Length of severe illness last yr.			
	Health costs (see expenditure)			
	Susceptibility to disaster	Freq. of crises		
		Kinds of crises		
	Crises costs (see expenditure)			
EDUCATION	Literacy all members			
	Highest level education Head			
FOOD SECURITY/HUNGER	Rice/months per year			
	Hunger last 3 months			
	Rice porridge last 3 months			

HOUSEHOLD CHARACTERISTICS	Family Size			
	Dependency ratio/labor supply		0 = < 7 dependents	
			1 = > 6 dependents	
	Number of income earners			
	Specific family conditions	Elderly		0 = none
				1 = yes
		Orphan		
		Children		0 = none
				1 = 1-2
				2 = 3-5
				3 = >5
		Head is widow/single		
		Widow/er with children		0 = Married
				1 – widow/divorced/single
		Single and seriously ill		
		Single mother with small child		
	Sex of all HH members			
	Relationship HH member to head			
	Age all HH members			
	Marital status all HH members			
	HH members in school			
	HH member working daily			
POVERTY CLASSIFICATION	VERY/EXTREMELY POOR			12+
	POOR		10-12	10-11
	MARGINAL -	Medium poor		8-9
	MARGINAL +			
	WELL OFF	Not poor	< 10	< 8
	RICH			
RANGE OF AGGREGATE SCORE			0 – 12	0 - 18

Annex 9: USG Identification Model

B Over the past 3 months

1. If in the HH no one could earn income	1 Point	
2. If interviewee is alone and is seriously ill	1 Point	
3. If no one in HH can read and write	1 Point	
4. For every seriously ill person in the HH	1 Point	
5. For every handicapped person in the HH	1 Point	
6. If single mother with child £ 16 years	1 Point	
	total	**B**

C Has there been hunger in this Household during the past 3 month because of lack of food	Never	0 Point	
	Sometimes	1 Point	
	Often	4 Point	
	All the time	5 Point	

E Signs of poverty

1. No home/rent £ 21000 riels	1 point		**E - F =**
2. Roof of leaves/plastic bags	1 point		
3. Floor is earth or bamboo	1 point		
4. Walls are leaves or bags	1 point		
5. House is often flooded	1 point		
	Total E =		

F Signs of wealth

1. If there rests no mortgage on the land	3 points	
2. If the Household has no debts	3 points	
3. If the HH gets water through waterpipe	1 point	
4. If HH lives in a modern high wooden house	1 point	
5. For every $10 of aid the HH gets monthly : 1 Point		
6. For every productive asset worth ≥ 50,000 R. : 1 Point		
7. For every 10.000 R of stock value ≥ 100.000 R. 1 Point		
	total F =	

H Last Month's Expenditure			**total per Month**
1. water		per day/ week / month	
2. Rice		per day/ week / month	
3. Food		per day/ week / month	
4. Cooking oil		per day/ week / month	
5. Rent of House/Land		per day/ week / month	
6. Gasoline		per day/ week / month	
7. School fees		per day/ week / month	
8. clothes		per day/ week / month	
9. transport		per day/ week / month	
10. electricity		per day/ week / month	
11. ceremony		per day/ week / month	
12. for drugs		per day/ week / month	
13. for doctor/clinic		per day/ week / month	
14. other payments		per day/ week / month	
		total H =	

A = Total number of HH members **H/A =**

D Last Month:	please circle		
Borrowed money ?	yes	**If yes, how much**	**D =**
	no		
G Older debts	please circle		
Borrowed money ?	yes	**If yes, how much?**	**G =**
	no		

I ASSETS	**value estimations**
1. water jars	
2. chicken	
3. pigs	
4. cows	
5. other livestock, fish	
6. bicycle	
7. motorbike	
8. radio-music player	
9. TV	
10. large batteries	
11. electrical materials	
12. other valuables	
total	
new loan	D =
old loan	G =
I =	

Indices	**Ref**	**Value**	**Points**	**Meaning**
condition 1	B	B = 0	1	NP
		B = 1	2	MP
		B = 2	3	P
		B > 2	4	VP
condition 2	C	C = 0	0	NP
		C = 1	1	MP
		C = 4	4	P
		C = 5	5	VP
condition 3	E-F	E minus F < 0	0	NP
		E minus F = 0-1	1	MP
		E minus F = 2-3	2	P
		E minus F > 3	3	VP
condition 4	H/A	H divided by A > 80,000 R.	0	NP
		H divided by A = 70,000-80,000 R.	1	MP
		H divided by A = 60,000-70,000 R.	2	P
		H divided by A < 60,000 R.	3	VP
condition 5	I	I > 500,000 R.	0	NP
		I = 400,000-499,000 R.	1	MP
		I = 300,000-399,000 R.	2	P
		I < 300,000 R.	3	VP

Poverty ranking		
	0-4	Not Poor
	5-9	Medium Poor
	10-14	Poor
	15-18	Very Poor

Annex 10 Prices of crops and other produce and items of expenditure

	Trapeang Thom	Prey Pir	Krasang Meachey	Thmei	Damnak Kralanh
Items	**Price**	**Price**	**Price**	**Price**	**Price**
A hand of water convolvulus	200 riel	100-200 riel	200 riel	100-200 riel	100-200 riel
A hand of long water lily	200 riel	200-400 riel	200-500 riel	100 riel	200-400 riel
A bird	500 riel	500 riel	500-700 riel	300-800 riel	500 riel
Wood for construction 1 m^3	600000-800000 riel	600000-800000 riel	600000-800000 riel	600000-800000 riel	600000-800000 riel
Rice 1kg	1200 riel	1100-1200 riel	1100-1200 riel	1100-1200 riel	1100-1200 riel
Rice seed 1kg	600-700 riel	600-700 riel	600-700 riel	600-700 riel	600-700 riel
Bean seed 1kg	2000 riel	1800-2200 riel	1800-2200 riel	2000 riel	2000-2200 riel
Corn seed 1kg	1800 riel	1500-2200 riel	1500-2200 riel	1500-2200 riel	1500-2200 riel
One hundred of corns	8000-10000 riel	6000-12000 riel	8000-10000 riel	8000-10000 riel	8000-10000 riel
Bean 1kg	1300 riel	1800 riel	1700 riel	1500 riel	2500 riel
Winter melon	200-400 riel	200-400 riel	200-500 riel	200-400 riel	200-400 riel
Water melon	200-700 riel	300-500 riel	300-500 riel	300 riel	200-500 riel
Pumpkin	300 riel	300-500 riel	300-500 riel	300-400 riel	500 riel
A hand of bananas	300-1000 riel	500 riel	500-600 riel	500 riel	500 riel
Sugarcane	100 riel	100-200 riel	200 riel	200 riel	200-400 riel
A dozen of coconut	3000-4500 riel	3000-5000 riel	5000-8000 riel	5000 riel	3000-8000 riel
Cabbage 1kg	800 riel	800 riel	800-1200 riel	800-1200 riel	1000-1200 riel
Potato 1kg	400-600 riel	500 riel	400-600 riel	300-500 riel	300 riel
Egg plant	500-800 riel	500-800 riel	500-800 riel	500-800 riel	500-800 riel
Custard apple	100 riel	100 riel	100 riel	100 rl	100 riel
Mango	100 riel	100 riel	100 riel	100 riel	100 riel
Sugar palm 1kg	1500 riel	1500 riel	1500 riel	1500 riel	1600 riel
Tamarind 1kg	700 riel	600 riel	500-700 riel	500 riel	500-700 riel
Cucumber 1kg	500-800 riel	500-800 riel	500-800 riel	500-800 riel	500-800 riel
Bamboo shoot 1kg	700 riel	600-700 riel	600 riel	600-700 riel	600-700 riel
Black sesame 1kg	4000 riel	4000-4500 riel	4000-4500 riel	4000-4500 riel	4000-4500 riel
White sesame 1kg	4500 riel	4500 riel	4500 riel	4500 riel	4500 riel
One basket of peanut	2500 riel	300-5000 riel	300-5000 riel	5000 riel	300-5000 riel
Vegetables 1kg	1000 riel	1500-1800 riel	1000-1500 kg	1500 riel	1200 riel

10 rice field crabs	300-500 riel	300-500 riel	300-500 riel	300-500 riel	300-500 riel
Chicken 1kg	8000-1000 riel	8000-1000 riel	8000-1000 riel	8000-1000 riel	8000-1000 riel
A duck	4000-5000 riel	4000-5000 riel	4000-5000 riel	4000-5000 riel	4000-5000 riel
Pork 1kg	8000-10000 riel	9000-1000 riel	8000-12000 riel	9000-1000 riel	9000-10000 riel
A sack of coal	8000-10000 riel	8000-10000 riel	8000-10000 riel	8500 riel	8000-10000 riel
A sack of fertilizer	75000 riel	75000 riel	70000 riel	60000-75000 riel	66000 riel
Fertilizer 1kg	1800 riel	1800 riel	1800 riel	1800 riel	1800 riel
Fish 1kg	3000-5000 riel	6000 riel	3000-6000 riel	2500 riel	3000-6000 riel
Frog 1kg	2000-2500 riel	2000-2500 riel	2000 riel	2500 riel	2000-2500 riel
Firewood (an ox cart/tractor)	7000-70000 riel	7000-70000 riel	7000-70000 riel	7000-70000 riel	7000-70000 riel
Old ox cart	60000-100000 riel	60000-100000 riel	70000-100000 riel	70000-100000 riel	70000-80000 riel
New ox cart	200000 riel	200000-250000 riel	200000-250000 riel	200000-250000 riel	250000 riel
Ox cart with tyres	300000-350000 riel	300000-350000 riel	300000-350000 riel	300000-350000 riel	300000-350000 riel
Old bicycle	50000 riel	50000 riel	40000-50000 riel	80000 riel	40000 riel
New bicycle	120000 riel	150000 riel	120000-130000 riel	120000 riel	120000 riel
Old motorbike	200000-350000 riel	200000-400000 riel	200000-400000 riel	200000-400000 riel	400000 riel
New motorbike	800000-4000000 riel	800000-4000000 riel	800000-4000000 riel	800000-4000000 riel	800000-4000000 riel
Boat without machine	60000-200000 riel	.....	.....	.....	.....
Plough	30000-50000 riel	45000 riel	40000-70000 riel	40000-115000 riel	40000-120000 riel
Rake	10000-15000	10000-15000	10000-15000	15000 riel	12000 riel
Pumping machine	160000 riel	70000 riel	80000-160000 riel	60000-100000 riel	40000-60000 riel
Sewing machine	100000-120000 riel	100000-120000 riel	100000-120000 riel	100000-120000 riel	240000 riel
Fishing instruments	5000-70000 riel		2000-5000 riel	4000-20000 riel	5000-25000 riel
Small battery	15000 riel	15000 riel	15000 riel	15000 riel	15000 riel
Big battery	50000-120000 riel	50000-120000 riel	50000-120000 riel	50000-120000 riel	50000-120000 riel
Radio	15000 riel	15000 riel	15000 riel	15000 riel	15000 riel
Stereo type	30000-50000 riel	40000-80000 riel	40000-80000 riel	40000-80000 riel	40000-80000 riel
New television	250000-300000 riel	150000 riel	250000 riel	140000 riel	140000 riel
Black and white television	40000-50000 riel	40000-50000 riel	40000-50000 riel	40000-50000 riel	40000-50000 riel
Cow	700000-3000000 riel	1000000-2000000 riel	1000000-2000000 riel	1000000-2000000 riel	1000000-2500000 riel
Horse					1000000 riel
Pig	40000-400000 riel	40000-400000 riel	40000-400000 riel	40000-400000 riel	40000-400000 riel

Petroleum 1liter	3400 riel	3400 riel	3400 riel	3200 riel	2800 riel
Gasoline 1liter	3000 riel	3600 riel	3500 riel	3400 riel	3400 riel
Chicken egg	400 riel	400 riel	400 riel	400 riel	400 riel
Duck egg	300 riel	300 riel	300 riel	300 riel	400-500 riel
One hundred sheet of thatch	20000-30000 riel	20000 riel	20000 riel	20000-30000 riel	17000 riel
Mat	5000-6000 riel	5000 riel	5000-6000 riel	5000 riel	6000 riel
Basket	4500-5000 riel	4500-5000 riel	4500-5000 riel	4500 riel	4500-5000 riel

Research team asked village chiefs, their wives, and grocery stall owners the prices of the items in the villages where the study was conducted.

Annex 11 Translating poverty identification criteria into variables

GTZ Kampot	See Annex 4
GTZ Kampong Thom	
Productive Land	As variable in database
Animals	Can be computed from variables in database
Resident land	Variable in database only enough to differentiate between very poor and poor but NOT between poor and not poor; both poor and not poor receive 1
Transportation	Can be computed from variables in database
Media equipment	Can be computed from variables in database
Housing	Needs some arbitrary assumptions to be computed from variables in database: roof = thatch & wall is none or thatch
Occupation	Needs some arbitrary assumptions to be computed from variables in database: Less than 3 wage laborers in the HH AND occupation that is NOT moto or taxi driver, small or established business, palm wine/sugar/charcoal production, skilled or unskilled or home-based employment receive 2 points; Taxi driver, established business, palm wine/sugar/charcoal production, skilled and employment receive 0 points irrespective of number of wage laborers in the HH; The rest receives 1 point.
Food security	As variable in database
Kirivong OD	
Productive Land	As variable in database
Animals	Can be computed from variables in database
Assets, transportation, media & other	Can be computed from variables in database
Housing	As variable in database
Income	As variable in database (like for GTZ Kampot TOTAL Income is used, not CASH income)
Dependency	Can be computed from variables in database (all non-working members of the HH)
UNICEF Svay Rieng	
Productive Land	As variable in database
Animals	Can be computed from variables in database
Assets, transportation, media & other	Can be computed from variables in database
Housing	Needs some arbitrary assumptions to be computed from variables in database: roof = thatch & wall is none or thatch or bamboo & floor is none or bamboo
Occupation	As variable in database
HH characteristics	
Elderly in HH	As variable in database
Nr. of children in HH	As variable in database
Head of HH alone	As variable in database

CFDS Monkul Borey & Sompou Meas	
Productive Land	As variable in database
Animals	Needs some arbitrary assumptions to be computed from variables in database: animals are cows, buffalos, horses, pigs, sheep & goats
Assets, transportation, media & other	Can be computed from variables in database
Housing	Needs some arbitrary assumptions to be computed from variables in database: none does not occur, thatch = roof: thatch & wall is none or thatch & floor is none or bamboo; wood = roof: galvanized & wall is bamboo or wood or galvanized & floor is wood
Income	
External assistance	As variable in database
Income/expenditure ratio	Needs some arbitrary assumptions to be computed from variables in database: (per capita) income=expenditure when both do not differ more than the average confidence margin (60.000 Riel); expenditure >> bigger than income when expenditure is more than the average standard deviation of income and expenditure (525000 Riel) bigger than income
Occupation	As variable in database
Health & other crises	As variable in database
Education	As variable in database
HH characteristics	As variable in database
AFH Mung Russey & Chlong	
Productive Land	As variable in database
Animals	Needs some arbitrary assumptions to be computed from variables in database: pigs or poultry = pigs and/or poultry; 1 or 2 pigs/sheep/goats = 1 or 2 pigs/sheep/goats/cows/buffalos/horses; for > 2 animals pigs/sheep/goats weigh less (3) than cows/buffalos/horses (4)
Assets, transportation, media & other	
transportation	As variable in database
Farming equipment	Needs some arbitrary assumptions to be computed from variables in database: Those with more than 2 cows/buffalos/horses but without irrigation pumps and/or tractors/iron buffalos are scored as having 1-2 cows/buffalos/horses
Housing	
Type/status	As variable in database
Roof	As variable in database
Wall	Needs some arbitrary assumptions to be computed from variables in database: Galvanized wall = wooden wall
Floor	As variable in database
Electricity/lighting	As variable in database
Income	As variable in database (like for GTZ Kampot TOTAL Income is used, not CASH income)
Expenditure (Health)	Can be computed from variables in database
Health and other crises (health)	As variable in database
HH characteristics	Can be computed from variables in database

Annex 12 Additional Tables

	Total HH	Listed HH	% of total	HH scored	% of listed	Listed HH interviewed	% of listed	% of total
Trapeang Thom	267	43	16%	40	93%	35	81%	13%
Prey Pi	221	46	21%	43	93%	42	91%	19%
Krasang Meanchey	311	111	36%	110	99%	89	80%	29%
Thmei	218	53	24%	0	0%	46	87%	21%
Damnak Kralanh	113	27	24%	14	52%	24	89%	21%
Total	1130	280	25%	208	74%	236	84%	21%

Table 2B Sample

Total HH: info from village chief
Listed HH: lists from
HH scored: lists from village chief
Listed HH interviewed: CAS was able to contact 273 of 280 listed HH (98%). Of these 33 were not home for the period of fieldwork, 3 had moved, and 1 was too old to be interviewed

Table 2B (cont.)

	Non-listed HH interviewed	% of total	Total HH Interviewed	% of total	Listed HH with score interviewed	% of HH scored	% of listed
Trapeang Thom	67	25%	102	38%	34	85%	79%
Prey Pi	63	29%	105	48%	39	91%	85%
Krasang Meanchey	12	4%	101	32%	88	80%	80%
Thmei	54	25%	100	46%	NA	NA	0%
Damnak Kralanh	76	67%	100	88%	13	93%	48%
Total	272	24%	508	45%	174	84%	63%

Table 3B Listed HHs were more likely to join the Village Planning Meeting than non-listed HHs. And they were less likely to miss the MVFL presentation.

			Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	Total
Listed HHs	**Did you join the Village Planning Meeting?**	Yes	28	32	68	35	15	**178 (75%)**
		No	7	10	21	11	9	58
	Total		35	42	89	46	24	236
Non-listed HHs	**Did you join the Village Planning Meeting?**	Yes	35	44	10	27	48	**164 (60%)**
		No	32	19	2	27	28	108
	Total		67	63	12	54	76	272
Listed HHs	**If YES, was a draft MVF List presented for comments?**	Yes	24	28	54	31	14	151
		No	4	4	14	4	1	**27 (15%)**
	Total		28	32	68	35	15	178
Non-listed HHs	**If YES, was a draft MVF List presented for comments?**	Yes	19	31	10	18	35	113
		No	16	13	0	9	13	**51 (31%)**
	Total		35	44	10	27	48	164

Table 3C False inclusions and false exclusions as identified by a sub-sample of the respondents

		Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh	Total
False exclusions	**Listed**	4					4
	Not listed	**2**			**1**		**3**
Subtotal		6			1		7
False inclusions	**Listed**	1		1	2	1	5
	Not listed			1			1
	Not interviewed		1	1	2		4
Subtotal		1	1	3	4	1	10
Total		7	1	3	5	1	17

	Trapeang Thom	Prey Pi	Krasang Meanchey	Thmei	Damnak Kralanh
Demographics, health, susceptibility to disaster					
Female headed HH	4	2	2	1	4
Labor ratio	3	1	1	4	4
No education HH head	3	1	3	2	5
Chronically ill	3	3	3	1	2
Handicapped	2	2	2	1	2
HH head often or always sick	5	3	2	1	4
HH often faces a crisis	5	1	3	2	4
Experienced crises during last year	5	1	1	1	4
TOTAL	30	14	17	13	29
Rank	**4**	**1**	**3**	**1**	**4**
Income, expenditure, employment, loans					
Trimmed Mean income/year/capita	5	2	1	3	3
HH with outstanding loans	2	3	1	4	5
Trimmed mean outstanding loans	1	1	1	1	5
Permanent employment HH head	5	2	1	3	4
Trimmed Mean yearly HH expenditure/capita	2	2	1	4	5
TOTAL	15	10	5	15	22
Rank	**3**	**2**	**1**	**3**	**5**
Value and quality of assets, including house					
Trimmed Mean cultivated land (ha)	2	1	2	2	1
Weighted average land quality	3	1	3	2	2
Rain water (farming): dry season	5	1	2	2	2
Trimmed Mean value transportation assets	2	4	1	3	5
Trimmed Mean value other assets	4	3	1	2	5
Old and dilapidated house	4	3	2	1	5
Very small house	4	3	1	1	5
Trimmed Mean value animals	2	4	1	3	5
TOTAL	26	20	13	16	30
Rank	**4**	**3**	**1**	**2**	**5**
Food security, hunger					
Rice bought on daily basis	1	3	1	4	5
Enough rice for > 6 months	3	2	1	4	5
Hunger often/always	3	2	1	3	3
Eat rice porridge often/always	2	2	1	4	5
TOTAL	9	9	4	15	18
Rank	**2**	**2**	**1**	**4**	**5**
Summary poverty ranking	**3**	**2**	**1**	**2**	**4**

Table 4B The poverty situation across 5 villages in terms of specific types of indicators

	CAS Extremely Poor	CAS Very Poor	VWG poor covered	CAS poor Total	VWG poor total	Ratio VWG poor covered/ VWG poor total	Ratio CAS poor total/ VWG poor total
	Housing situation						
VWG Extremely poor	10	42	52		144		
VWG Very poor	3	0	3		30		
VWG poor Total					174		
CAS poor covered	13	42	55			0.32	
CAS poor total	14	45		59			0.34
	Rice and other crops production						
VWG Extremely poor	65	40	105		132		
VWG Very poor	9	11	20		25		
					157		
CAS poor covered	74	51	125			0.80	
CAS poor total	84	60		144			0.92
	Income situation						
VWG Extremely poor	49	44	93		165		
VWG Very poor	2	3	5		7		
					172		
CAS poor covered	51	47	98			0.57	
CAS poor total	57	49		106			0.62
	Cattle						
VWG Extremely poor	71	15	86		96		
VWG Very poor	23	18	41		48		
					144		
CAS poor covered	94	33	127			0.88	
CAS poor total	100	45		145			1.01
	Means of transportation						
VWG Extremely poor	148	8	156		167		
VWG Very poor	4	0	4		4		
					171		
CAS poor covered	152	8	160				
CAS poor total	162	14		176		0.94	
	Media assets and other valuables						1.03
VWG Extremely poor	32	96	128		158		
VWG Very poor	0	3	3		3		
					161		
CAS poor covered	32	99	131			0.81	
CAS poor total	35	116		151			0.94
	Food security						
VWG Extremely poor	58	39	97		42		
VWG Very poor	11	15	26		122		
					164		
CAS poor covered	69	54	123			0.75	
CAS poor total	71	59		130			0.79
Totals poor covered	485	334	819				
Totals poor	523	388		911	1143		
Ratio poor covered/ VWG poor						0.72	
Ratio CAS poor/ VWG poor							0.80

Table 9B: Comparing VWG poverty criteria and CAS variables at criterion/variable level

Annex 13 Comparison of poverty identification models: background tables

Table A Kampong Thom model compared with Kampot MVFL model

		CAS Kampot																Total	Total KT non-poor/ poor exact	Total KT non-poor/poor margin
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	16			
Kampong Thom	2	4	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	8		
	3	6	5	4	1	0	0	1	0	0	0	0	0	0	0	0	0	17		
	4	7	8	4	3	1	0	0	0	0	0	0	0	0	0	0	0	23		
	5	7	10	8	3	3	1	0	0	0	0	0	0	0	0	0	0	32	311 **(61%)**	250 **(49%)**
	6	5	8	12	9	4	6	1	1	0	0	0	0	0	0	0	0	46		
	7	2	6	10	16	7	5	2	2	2	0	0	0	0	0	0	0	52		
	8	0	1	8	12	11	8	12	14	4	2	0	0	0	0	0	0	72		
	9	0	1	1	4	9	12	15	10	5	1	1	2	0	0	0	0	61		
	10	0	1	0	2	2	8	12	15	11	11	3	3	0	2	0	0	70	197 **(39%)**	258 **(51%)**
	11	0	0	0	0	1	2	7	11	7	5	4	3	3	0	0	0	43		
	12	0	0	0	0	1	1	4	4	11	9	3	9	2	3	1	0	48		
	13	0	0	0	0	0	0	0	2	2	5	4	6	3	2	1	0	25		
	14	0	0	0	0	0	0	0	0	0	0	0	2	3	1	1	1	8		
	15	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3		
Total		31	42	49	50	39	43	54	59	42	33	15	25	14	8	3	1	508		
Total K non-poor/poor exact		254 **(50%)**						254 **(50%)**												
Total K non-poor/poor margin		211 **(42%)**					297 **(58%)**													
Total overlap K/KT exact (% base CAS poor)								23	32	31	30	14	23	14	8	3	1	179 **(70%)**		
Total overlap K/KT margin (% base CAS poor)							23	38	42	36	31	15	25	14	8	3	1	236 **(79%)**		

Table B AFH model compared with Kampot MVFL model

		Kampot CAS score																Total	Total AFH non-poor/ poor exact	Total AFH non-poor/ poor margin
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	16			
AFH score	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1		
	4	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	4		
	5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1		
	6	0	0	0	0	0	0	0	0	0	1	0	2	1	0	2	0	6		
	7	0	0	0	0	0	0	0	0	1	1	1	4	4	1	0	0	12		
	8	0	0	0	0	0	2	2	3	2	1	1	2	0	0	0	0	13	225 **(44%)**	280 **(55%)**
	9	0	0	0	0	1	1	1	1	4	5	1	3	0	2	1	1	21		
	10	0	0	2	2	1	3	1	10	4	5	0	3	4	0	0	0	35		
	11	1	0	4	1	2	5	3	8	4	5	0	5	1	1	0	0	40		
	12	1	1	1	2	3	7	4	6	6	1	5	1	0	2	0	0	40		
	13	1	2	1	1	6	1	13	8	6	7	3	2	1	0	0	0	52		
	14	2	2	3	7	4	4	9	8	10	3	2	1	0	0	0	0	55	283 **(56%)**	228 **(45%)**
	15	0	2	4	8	5	6	8	7	3	3	1	0	0	0	0	0	47		
	16	0	2	6	8	7	5	4	2	0	0	1	0	0	0	0	0	41		
	17	2	4	9	7	5	4	4	1	0	1	0	0	0	0	0	0	37		
	18	0	3	4	5	1	3	2	0	0	0	0	0	0	1	0	0	23		
	19	4	6	3	2	1	0	1	0	0	0	0	0	0	0	0	0	17		
	20	1	9	4	3	0	0	0	1	0	0	0	0	0	0	0	0	18		
	21	2	4	0	1	0	2	0	0	0	0	0	0	0	0	0	0	9		
	22	4	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	9		
	23	2	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	11		
	24	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4		
	25	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3		
	27	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
	29	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
	30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
	32	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
Total		31	42	49	50	39	43	54	59	42	33	15	25	14	8	3	1	508		
Total K non-poor/poor exact		254 **(50%)**						254 **(50%)**												
Total K non-poor/poor margin		211 **(42%)**					297 **(58%)**													
Total overlap K/AFH exact (% base CAS poor)								24	36	27	26	12	23	14	7	3	1	173 **(68%)**		
Total overlap K/AFH margin (% base CAS poor)							23	33	44	37	29	14	25	14	7	3	1	230 **(77%)**		

Table C UNICEF Svay Rieng model compared with Kampot MVFL model

		UNICEF Svay Rieng														Total	Total Kampot non-poor/ poor exact	Total Kampot non-poor/ poor margin
		1	3	4	5	6	7	8	9	10	11	12	13	14	15			
CAS Kampot	0	1	2	6	5	5	4	1	3	1	2	1	0	0	0	31	254 **(50%)**	211 **(42%)**
	1	0	0	3	4	12	4	11	5	3	0	0	0	0	0	42		
	2	0	0	0	2	5	11	10	10	8	3	0	0	0	0	49		
	3	0	0	0	0	2	8	11	11	13	4	1	0	0	0	50		
	4	0	0	0	0	0	3	7	11	9	3	5	1	0	0	39		
	5	0	0	0	0	0	1	11	10	14	5	1	1	0	0	43		297 **(58%)**
	6	0	0	0	1	0	0	6	9	18	14	4	0	2	0	54	254 **(50%)**	
	7	0	0	0	0	0	0	6	12	14	15	8	4	0	0	59		
	8	0	0	0	0	0	0	1	3	12	14	7	3	2	0	42		
	9	0	0	0	0	0	0	1	2	7	9	7	3	4	0	33		
	10	0	0	0	0	0	0	0	2	3	3	4	1	2	0	15		
	11	0	0	0	0	0	0	1	1	2	5	7	4	4	1	25		
	12	0	0	0	0	0	0	0	0	0	5	4	1	1	3	14		
	13	0	0	0	0	0	0	0	0	0	3	3	1	1	0	8		
	14	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3		
	16	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1		
Total		1	2	9	12	24	31	66	79	104	85	54	21	16	4	508		
Total UNICEF non-poor/poor exact		79 **(16%)**						429 **(84%)**										
Total UNICEF non-poor/poor margin		48 **(9%)**						460 **(91%)**										
Total overlap Kampot/UNICEF exact								15	29	56	68	46	19	16	4	253 **(100%)**		
Total overlap Kampot/UNICEF margin							1	26	39	70	73	47	20	16	4	296 **(100%)**		

Table D CFDS Monkul Borey model compared with Kampot MVFL model

		CFDS Monkul Borey																Total	Total Kampot non-poor/ poor exact	Total Kampot non-poor/ poor margin
		13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	29			
CAS Kampot	0	1	0	3	3	5	5	4	4	1	3	1	0	1	0	0	0	31		
	1	0	1	5	4	10	2	3	7	6	2	1	1	0	0	0	0	42		
	2	0	2	1	1	4	8	6	12	5	7	1	1	1	0	0	0	49	254 **(50%)**	211 **(42%)**
	3	0	0	2	2	3	9	9	9	9	5	2	0	0	0	0	0	50		
	4	0	0	0	0	2	5	6	7	6	5	5	1	2	0	0	0	39		
	5	0	1	1	1	1	4	4	2	9	8	5	4	2	1	0	0	43		
	6	0	0	0	1	2	6	13	6	11	9	4	0	2	0	0	0	54		
	7	0	0	0	0	2	13	5	8	14	5	4	6	2	0	0	0	59		
	8	0	0	1	0	2	3	3	6	3	10	6	3	3	2	0	0	42		
	9	0	0	0	0	1	1	3	5	5	6	5	5	0	2	0	0	33		
	10	0	0	0	2	1	1	0	2	4	0	0	3	1	1	0	0	15	254 **(50%)**	297 **(58%)**
	11	0	0	0	0	0	1	2	0	0	3	7	5	6	0	1	0	25		
	12	0	0	0	0	0	0	1	0	1	1	5	2	0	1	2	1	14		
	13	0	0	0	0	0	1	0	0	1	1	1	0	2	2	0	0	8		
	14	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	3		
	16	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1		
Total		1	4	13	14	33	59	59	68	76	66	47	31	23	9	3	2	508		
Total CFDS Monkul Borey non-poor/ poor exact		32 **(6%)**				476 **(94%)**														
Total CFDS Monkul Borey non-poor/ poor margin		18 **(4%)**			490 **(96%)**															
Total overlap Kampot/CFDS Monkul Borey exact Base Kampot					8	26	27	27	40	36	32	24	17	8	3	2		250 **(98%)**		
Total overlap Kampot/CFDS Monkul Borey margin Base Kampot					4	9	30	31	29	49	44	37	28	19	9	3	2	294 **(99%)**		

Table E CFDS Sompou Meas model compared with Kampot MVFL model

		CFDS Sompou Meas																Total	Total Kampot non-poor/ poor exact	Total Kampot non-poor/ poor margin
		13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	29			
CAS Kampot	0	1	0	3	3	5	5	4	4	1	3	1	0	1	0	0	0	31		
	1	0	1	5	4	10	2	3	7	6	2	1	1	0	0	0	0	42		
	2	0	2	1	1	4	8	6	12	5	7	1	1	1	0	0	0	49	254 **(50%)**	211 **(42%)**
	3	0	0	2	2	3	9	9	9	9	5	2	0	0	0	0	0	50		
	4	0	0	0	0	2	5	6	7	6	5	5	1	2	0	0	0	39		
	5	0	1	1	1	1	4	4	2	9	8	5	4	2	1	0	0	43		
	6	0	0	0	1	2	6	13	6	11	9	4	0	2	0	0	0	54		
	7	0	0	0	0	2	13	5	8	14	5	4	6	2	0	0	0	59		
	8	0	0	1	0	2	3	3	6	3	10	6	3	3	2	0	0	42		
	9	0	0	0	0	1	1	3	5	5	6	5	5	0	2	0	0	33		
	10	0	0	0	2	1	1	0	2	4	0	0	3	1	1	0	0	15	254 **(50%)**	297 **(58%)**
	11	0	0	0	0	0	1	2	0	0	3	7	5	6	0	1	0	25		
	12	0	0	0	0	0	0	1	0	1	1	5	2	0	1	2	1	14		
	13	0	0	0	0	0	1	0	0	1	1	1	0	2	2	0	0	8		
	14	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	3		
	16	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1		
Total		1	4	13	14	33	59	59	68	76	66	47	31	23	9	3	2	508		
Total CFDS Sompou Meas non-poor/ poor exact		65 **(13%)**					443 **(87%)**													
Total CFDS Sompou Meas non-poor/ poor margin		32 **(6%)**					476 **(94%)**													
Total overlap Kampot/CFDS Sompou Meas exact Base Kampot							26	27	27	40	36	32	24	17	8	3	2	242 **(95%)**		
Total overlap Kampot/CFDS Sompou Meas margin Base Kampot						9	30	31	29	49	44	37	28	19	9	3	2	290 **(98%)**		

Table F Kirivong model compared with Kampot MVFL model

		Kirivong											Total	Total Kampot non-poor/ poor exact	Total Kampot non-poor/ poor margin
		0	1	3	4	5	6	7	8	9	10	11			
CAS Kampot	0	26	0	5	0	0	0	0	0	0	0	0	31		
	1	20	1	18	0	0	3	0	0	0	0	0	42		
	2	16	0	25	3	0	5	0	0	0	0	0	49	254 **(50%)**	211 **(42%)**
	3	16	1	27	1	0	4	0	0	1	0	0	50		
	4	9	1	15	2	1	9	0	0	2	0	0	39		
	5	4	0	18	7	0	12	0	0	2	0	0	43		
	6	3	3	20	8	0	13	4	0	1	2	0	54		
	7	1	3	13	12	5	11	9	1	3	0	1	59		
	8	1	3	12	2	3	5	8	4	0	2	2	42		
	9	0	0	6	8	4	5	5	2	1	1	1	33		
	10	0	1	0	5	1	2	4	1	1	0	0	15	254 **(50%)**	297 **(58%)**
	11	0	0	1	2	2	4	3	1	3	3	6	25		
	12	0	0	0	0	1	2	2	3	0	2	4	14		
	13	0	0	0	0	1	0	4	0	0	1	2	8		
	14	0	0	0	0	0	0	1	2	0	0	0	3		
	16	0	0	0	0	0	0	0	0	0	0	1	1		
Total		96	13	160	50	18	75	40	14	14	11	17	508		
Total Kirivong non-poor/poor exact		480 **(94%)**									28 **(6%)**				
Total Kirivong non-poor/poor margin		466 **(92%)**								42 **(8%)**					
Total overlap Kampot/Kirivong exact Base Kampot											11	17	28 **(11%)**		
Total overlap Kampot/Kirivong margin Base Kampot										11	11	17	39 **(13%)**		

TABLE G: POVERTY IDENTIFICATION MODELS: criteria categories and proportions of poor						
CRITERIA CATEGORIES	**GTZ Kampot**	**GTZ Kampong Thom (Rural)**	**CFDS Monkul Borey CFDS Sompou Meas *** **	**AFH Mung Russey AFH Chlong ****	**Kirivong**	**UNICEF Svay Rieng ***
Land under cultivation		95%	36%	67% 41%	33%	67%
Animals, incl. poultry	52%	40%	61%	59%	22%	66% 70%
Assets, incl. residential land and traction animals, debts	73% 57%	68% 100% 80%	63% 9%	94% 97% 99%	16%	59%
Housing	21%	51%	29%	27% 55% 78% 42%	27%	84%
Electricity/lighting				100%		
Income	41%		87%		60%	
Expenditure			61%	25%		
Occupation		95%	33%			39%
Health & other crises			18% 10%	22%		
Education, literacy			61%			
Food security/Hunger	61% 42%	73%				
HH Characteristics			48%	5%	4%	16% 34% 28%
Average proportion poor across criteria categories	**50%**	**63%**	**43%**	**58%**	**27%**	**51%**
Overall proportion poor	**50%**	**39%**	**94%/87%**	**44%**	**6%**	**84%**

* if there is a range of three points (0,1,2), the proportion of those with a 1 is assigned half to non-poor and half to poor; if there is a larger range, 1 is assigned in total to non-poor.
** if the range is only 2 or 3 points (0,1 or 0,2, or 0,1,2), only the 0 is assigned to poor, if the range is 3 or more (0,1,2,3 or 0,1,2,3,4) 0 and 1 are assigned to poor
*** all criteria range from 0 to 3; 2 is assigned half to poor (3 is poor), but for housing all of 2 is assigned to poor.

Table H Overlap across models at the level of individual HHs

	GTZ Kampot 1	GTZ Kampong Thom 2	CFDS Sompou Meas 3	AFH 4	UNICEF Svay Rieng 5	Poor HH identified by all models 6
GTZ Kampot	100%	91%	55%	77%	59%	**27%**
GTZ Kampong Thom	70%	100%	42%	67%	46%	
CFDS Sompou Meas	95%	94%	100%	98%	92%	
AFH	68%	76%	50%	100%	51%	
UNICEF Svay Rieng	100%	99%	89%	97%	100%	
Proportion of poor HH	**50%**	**39%**	**87%**	**44%**	**84%**	

1 = base is poor HHs as identified by Kampot MVFL model
2 = base is poor HHs as identified by Kampong Thom MVFL model
3 = base is poor HHs as identified by CFDS Sompou Meas model
4 = base is poor HHs as identified by AFH model
5 = base is poor HHs as identified by UNICEF Svay Rieng model
6 = base is all HHs surveyed in Kampot

Table I Similarity indicator across all models and averaged across all comparisons between two models

Similarity Indicator (column model is benchmark)	GTZ Kampot	GTZ Kampong Thom	CFDS Sompou Meas	AFH	UNICEF Svay Rieng
GTZ Kampot	1.0	0.69	0.55	0.65	0.59
GTZ Kampong Thom	0.70	1.0	0.42	0.67	0.46
CFDS Sompou Meas	0.21	-0.02	1.0	0.12	0.86
AFH	0.68	0.66	0.50	1.0	0.51
UNICEF Svay Rieng	0.32	0.09	0.89	0.17	1.0
Proportion of poor	**50%**	**39%**	**87%**	**44%**	**84%**
Similarity Indicator Averaged across both models compared	**GTZ Kampot**	**GTZ Kampong Thom**	**CFDS Sompou Meas**	**AFH**	**UNICEF Svay Rieng**
GTZ Kampot	1.0	**0.70**	**0.38**	**0.67**	**0.39**
GTZ Kampong Thom		1.0	**0.20**	**0.67**	**0.28**
CFDS Sompou Meas			1.0	**0.31**	**0.88**
AFH				1.0	**0.34**
UNICEF Svay Rieng					1.0