

2. METHODOLOGY

The Study

Survey Design and Sample

The study is a general population survey and did not specifically target IDP areas or communities. A random sample of barangays was conducted proportionate to the population size using a list of all barangays within the study area of Central Mindanao. This design was adopted because it would yield statistically representative data on the wider population's experience, perceptions and opinions at the time of the survey. It also accorded the ability to compare between groups based on their experience of displacement and current settlement status.

The study focused on Central Mindanao because of the concentration of violence and episodes of mass displacement there over the last decade. Five provinces (also referred to as strata in this report) were selected for the study: (1) Lanao del Norte, (2) North Cotabato, (3) Sultan Kudarat, (4) Lanao del Sur, and (5) Maguindanao. In addition, Cotabato City was included in the sample as a separate stratum. In each of the strata, the selection of respondents was based on a standard multi-stage cluster random sampling procedure.

At the first stage, Enumerated Areas (EAs) were randomly selected proportionate to the EA's population size based on the 2007 census data. All of the EAs were considered, whether they had known episodes of displacement or not, and regardless of their urban/rural status. As a result, the data represents the general population in each of the province. The number of EAs in each stratum was assigned in relation to the population size. A minimum of 40 EAs were selected.

At the second stage, the researchers selected 12 households to participate in the interview in each of the EAs, with a target sample ranging between 40 EAs x 12 = 480 households, and 48 EAs x 12 households = 576 households. The target sample size was determined using a prevalence estimate formula, for an alpha of 5% and 80% power.⁴ The sample size was adjusted for the complex design and non-response. The only exception is Cotabato City for which the target sample was 96.

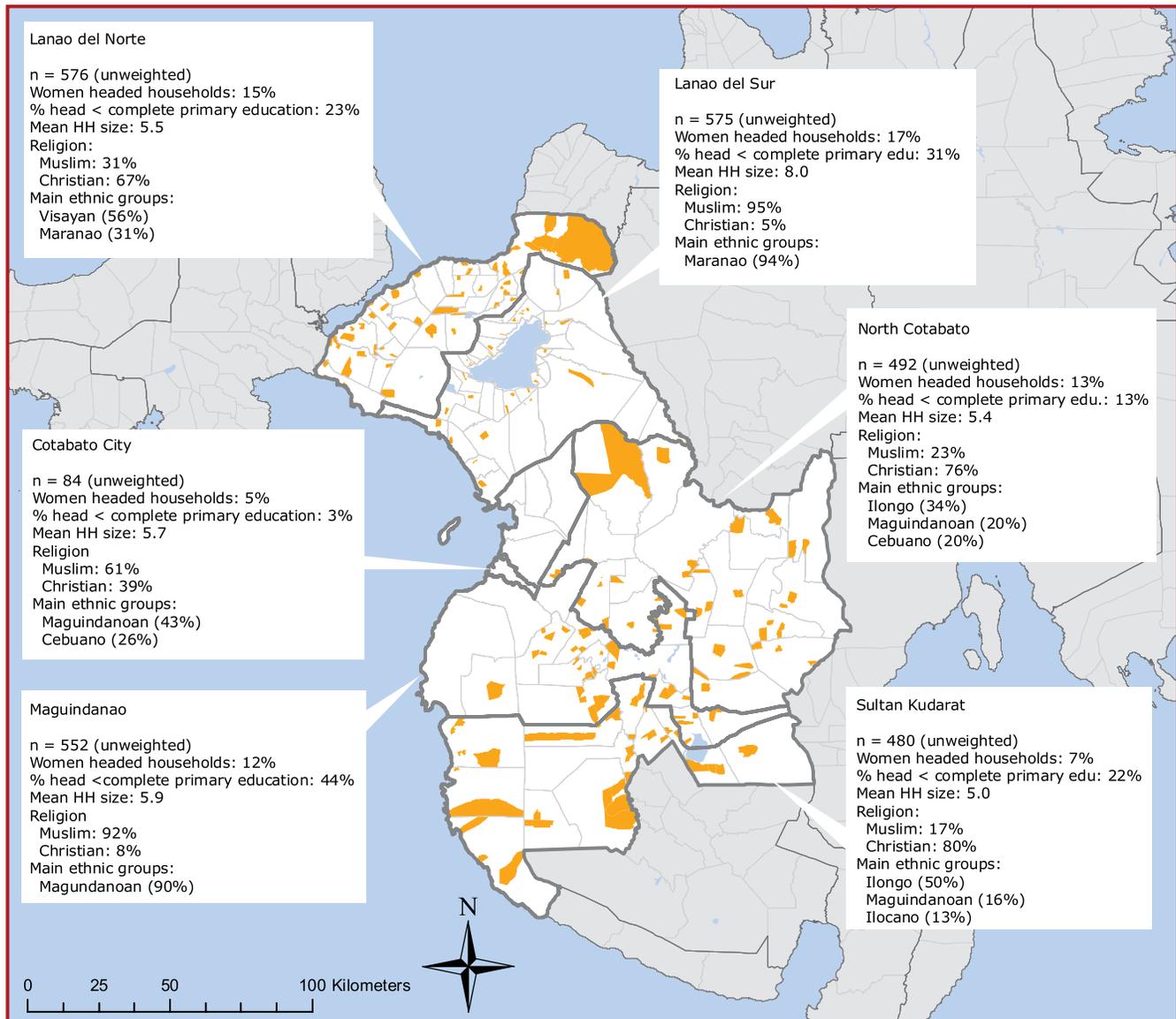
Households were selected using a random geographic method (EPI) in which the enumerator would select a random direction from the center of a locality and would identify every other household in that direction based on a skipping pattern determined by the number of household in that direction. Within each household, one adult was randomly selected using an alphabetical random selection procedure. Three attempts were made to contact a selected household or individual, typically over the course of one day. If a household could not be contacted, the household was substituted in favor of the next eligible household.

Sample Characteristics

The findings of this study are based on a total of 2,759 interviews conducted in selected areas of mainland Mindanao with randomly selected adult residents (i.e. above the age of 18) in November and December 2010. This section provides demographic characteristics and the settlement status of people of five provinces and Cotabato City.

⁴ This sets the probability that results are due to chance rather than reflecting the true population value at 5%.

Figure 1: Sample distribution and characteristics in selected areas of mainland Mindanao, Philippines



The sample included mostly male-headed households (87%). 13 percent of households were headed by women. Ten percent of the households were headed by a widow(er), divorced, or never-married individual. The average age of the household head was 43.2 years. Most households reported that the head was able to read and write simple messages (93%). However, one in four head of households had no formal education (6%) or did not complete primary education (18%). Women heads of household were 1.5 times more likely to be illiterate compared to their male counterparts (O.R. 1.498, $\chi^2 = 7.08$, 1 d.f., $p=0.008$).⁵ The average household was composed of 6 individuals, with an average of 3 children aged 14 years old or less, and 3 adults aged 15-59 years old, resulting in an average dependency ratio (dependents/active) of 1.

⁵ O.R. or Odds Ratio is the ratio of the odds of one event affecting a group to the odds of that same event affecting another group. It indicates the strength of association between groups and events. The chi-square test is used to measure the strength and significance of that association, with a p-value below .05 being considered as statistically significant.

A majority of the population reported being Muslim (53%). 46 percent indicated being Christians, with 1 percent reporting other beliefs. The ethnic distribution of the sample reflected the selected area's population, with the Maranao (29%) representing the largest proportion, followed by the Maguindanaon (23%), Ilongo (17%), Visayan (11%), Cebuano (9%), and Ilocano (4%). Together these six groups accounted for 89 percent of the population. Other groups were represented by 2 percent or less of the population.

Most respondents identified religion as the main factor defining their identity (65%), over clan (23%), ethnicity (7%), and nationality (5%). Religion was the most frequent defining factor among Muslim respondents (82%), compared to 46 percent among Christians, and 17 percent among those with another religious belief. Christian respondents and respondents with another religious belief frequently identified clans as being important to their identity (respectively 31% and 42% of the respondents).

Research Instruments and Measurements

The household survey on which this report is based was designed following a desk review and interviews with key informants. The questionnaire was developed by a team with local knowledge of Mindanao, as well as thematic expertise in issues of internal displacement and resettlement, peace and conflict, and food security. Representatives from various institutions, including UN, government and bilateral donor agencies were consulted. The resulting questionnaire was structured so as to contain both open-ended and close-ended questions covering 16 sections: (1) demographics, (2) priorities, (3) services, (4) livelihood, (5) information, (6) displacement, (7) land, (8) social relations, (9) conflict, (10) security, (11) peace, (12) restitutions, (13) food consumption, (14) credit and expenditures, (15) shocks, and (16) assistance. Response options based on pilot interviews and experience from prior projects were given to interviewers but not read to the respondents. An "other specify" option was always available to record answers that were not pre-coded.

The questionnaire and consent form were prepared initially in English. They were then translated into the main local languages. Given the multiplicity of local languages, however, not all languages could be covered. In situations where a pre-translated questionnaire was not available, interviewers themselves translated the questions into the language spoken by the respondent.

Prior to the interview, the enumerators used an informed consent form to gain permission to conduct the interview. This explained to the respondent the goal of the study, the anonymous and confidential character of the interview, the fact that no remuneration would be provided and that the interviewee could refuse or stop the interview at any time. The interviewee was also informed that the interview would last approximately one hour.

In responding to the survey questions, households self-identified their settlement status based on whether or not they had experienced displacement in the last ten year prior to the survey, and whether or not they considered themselves displaced at the time of the survey, resettled in a new site, or returned home. When reporting the causes of displacement (armed conflicts, ridos natural disasters, or economic reasons) households were able to identify more than one cause of displacement. Since the households self-identified their settlement status, it is possible that other stakeholders would use a different definition and that not all the households would be considered by all agencies to be forcibly, or still, displaced.

Data Collection and Analysis

The data was collected over a six weeks period in November and December 2010 through 2,759 interviews. The data was subsequently entered manually in an access database and imported into a statistical software for analysis (SPSS Statistical Package for the Social Sciences) for analysis. After a first quality check and flagging of outliers, a full review

of the data entry was conducted to minimize data entry errors. Given the sampling methodology summarized above, adjustment weights were computed to provide results representative for the area under study.

	Target sample	Actual sample
Lanao del Norte	576	576
North Cotabato	480	492
Sultan Kudarat	480	480
Lanao del sur	576	575
Maguindanao	576	552
Cotabato City	96	84
Total	2,784	2,759

Figure 1:
Sample distribution

In addition to the slight differences in the size of the planned and actual sample, certain barangays identified for the survey had to be replaced with other barangays. Of the 231 barangays selected for this study, 23 (10%) had to be replaced due to insecurity and/or inaccessibility, most frequently in Maguindanao (8 replacements) and Lanao del Sur (6 replacements). In addition, 420 selected households and 502 individuals had to be replaced, most frequently because they could not be contacted at the time of the interview or because they refused to participate.

Study Limitations

All possible steps were taken to ensure that the results accurately represent the context and situation in the selected areas of mainland Mindanao. Some limitations to the study should nonetheless be noted, along with the mitigation measures taken to counter them:

- The data is representative of the population of each of the provinces selected for the survey. The results do not encompass the population of Mindanao as a whole.
- Some selected households and individuals could not be interviewed for various reasons (e.g. being away, refusal to participate – see sample section). It is not possible to know how these selected respondents might have differed from the rest of the sample. However, appropriate replacement procedures were established to mitigate against any possible selection bias.
- The sample procedure did not specifically target indigenous populations or populations with specific occupations that make them less accessible (e.g. mining). As a result, groups that only represent a small minority of the population may not be well represented in the sample. However, the sample was designed to provide representative data for the population within each of the provinces in the selected areas.
- All of the results were reported by the respondents and there was no fact checking of the responses (e.g. settlement status is based on self-reporting by the respondents).
- Inaccurate recall and quantitative estimates may affect the validity of the findings. To limit the potential of this effect, the enumerators were trained to facilitate recall (e.g. using a locally adapted calendar of events) and to maximize the accuracy of data (e.g. by checking the consistency and logic of responses).
- It is possible that expectations for ulterior benefits influenced the results. However it was explained to respondents that the interview was anonymous and that no benefit was to be expected.
- The questionnaire was developed in English and administered in the language of the respondent. A 5 day intensive training was conducted to reduce individual variations on how enumerators interpreted the questionnaire and understood the questions, and included a field pilot reflecting survey conditions.