From AMS-II V 13 Page 23

If the standard deviation of the nine test results indicated above is very small and 90/10 precision requirement is met (in this case, the value of the t-distribution for 90 per cent confidence shall be used instead of Z value), the efficiency determined is acceptable, otherwise more sample tests would be required until 90/10 precision is met.

From Standard and Sampling version 9.0

Page 4

Reliability of a sample-based estimate is typically expressed in terms of the probability that the population parameter value falls within a specified distance from the sample-based estimate. The probability is called the "confidence", and the distance is referred to as the "precision". Precision can be expressed in absolute units or in relative (percentage) terms, that is, as a percentage of the anticipated target value. This standard uses relative units for the proportion value of parameters as well as for the mean value of parameters used in the calculation. Confidence is the likelihood that the sampling has resulted in the target value within a certain range of values (i.e. precision);

A high level of confidence is desirable, and levels of 90 per cent and 95 per cent confidence are commonly used. Equally, small margins of error are desirable, and frequently a precision of 10 per cent is used. The required reliability (both precision and confidence) determines the sample size.

Page 6-7

Precision of 10 per cent, that is, ± 10 per cent in this standard, shall be calculated:

(b)As a relative term when the parameter of interest is a mean. For example, ± 10 per cent in relative terms means that the interval around a mean value of 4 is 3.6 to 4.4.

From Guidelines Sampling and surveys for CDM project activities and programmes of activities

Page 11

Sample size addresses and justifies the estimated target number of "units" – pieces of equipment, solar cookers, buildings, motors, log-books, etc. – which are to be studied (i.e. the sample size). The justification shall include the parameter of interest, the value it is expected to take and an estimate of the variance associated with the data, as well as the level of confidence

and precision (note that if the parameter of interest is a proportion, or a percentage, then there is no need to specify a variance estimate).

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The level of precision (e.g. ±10% of relative value of the parameter's true value) and confidence (e.g. 90% or 95%) in that precision which is desired for 26 of 114 CDM-EB67-A06-GUID Guideline: Sampling and surveys for CDM project activities and programmes of activities Version 04.0 determining the parameter also determines the sample size. The higher the required confidence and the narrower the precision the more samples are required.

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For sample size determination of a proportion

$$n \geq \frac{1.645^2 \, N \times p(1-p)}{(N-1) \times 0.1^2 \times p^2 + 1.645^2 \, p(1-p)}$$

Equation (1

Where:

n	=	Sample size
N	=	Total number of households (640,000)
p	=	Our expected proportion (0.50)
1.645	=	Represents the 90% confidence required
0.1	=	Represents the 10% relative precision ($0.1 \times 0.5 = 0.05$ = 5% points either side of p)