

## Appendix 3

### Estimate Vector Population

<i>Vector</i>	<i>Indicators (collecting and sampling)</i>
<b>Mosquitoes</b>	<p>To evaluate the average density of vector population of the adult mosquito, several shelters in the camp should be selected. In order to evaluate the effectiveness of the control programme, these same shelters must be measured at the same time of the day after control measures have taken place.</p> <p>Procedure for collecting : In the shelter, close all openings, windows, holes, etc.. Spread a white sheet on the floor of the rooms. Spray the insecticide and wait 20 minutes until the insecticide has killed the mosquitoes. The sheet can be removed from the shelter after the killed adult mosquitoes have been counted. The number of persons living in the shelter must be recorded. The following can then be determined:</p> <ol style="list-style-type: none"> <li>1 - The number of killed adult mosquitoes divided by the number of inspected shelters will give the average mosquito density per shelter.</li> <li>2 - The number of killed adult mosquitoes divided by the number of persons occupying each shelter will give the average number of mosquitoes per person.</li> <li>3 - The number of mosquitoes found .with blood in their abdomen (red or black colour) divided by the number of person living in the shelter will give the average number of bites per person.</li> </ol> <p>The collected mosquitoes should be sent to a laboratory for identification.</p>
<b>Non-biting flies</b>	<p>Butterfly nets or traps can be used for collecting the adult flies for identification and for counting the number of flies present. The other procedure is to count the average number of flies that land on a grill placed where flies congregate during three 30-second periods. The time of day and the weather must be identical in order to compare the results with the others taken from other locations in the camp.</p>
<b>Blackflies</b>	<p>Number of specimens collected per person per day, daily capture occurs on human bait</p>
<b>Sandflies</b>	<p>Number of specimens collected per trap, oiled-paper or light trap</p>

## EMERGENCY VECTOR CONTROL

<i>Vector</i>	<i>Indicators (collecting and sampling)</i>
<b>Fleas</b>	<p>Rat fleas : A rat should be captured and killed, place in a plastic bag and the number of fleas living on the dead body counted. This should be carry out per individual rat and then the percentage of rodents carrying fleas and the average numbers of fleas per host can be determined.</p> <p>Human fleas : number of specimens collected per light and/or carbon dioxide trap. These can also be captured during the day by hand from bedding. The use of mouth-operated sucking tubes or so-called aspirators must be avoided due to the potential high risk of disease transmission (Sabatinelli, 1996).</p> <p>Specimens captured should be preserved in 70% alcohol and 3% saline solutions for identification and bacteriological research.</p>
<b>Lice</b>	Percentage of persons found positive on inspection
<b>Scabies mites</b>	Percentage of persons found positive on inspection. Detection of scabies is virtually impossible before the itching starts, about 3 weeks after infestation
<b>Ticks</b>	Number of specimens collected on sweeping cloth. In resting places such as grassland, use a piece of light coloured fabric and sweep the vegetation. The ticks will attach themselves on the fabric. Ticks should be removed with tweezers, and preserved in 70% alcohol for later identification.
<b>Bugs</b>	Percentage of houses infected. Nymphs and adults bugs live in colonies in dark shelters. They feed at night on humans and animals but it is easy to dislodge them during the day by spraying with a pyrethroid.