The individual risk, as determined by summing the risk, for the person most at risk, from all the landslide hazards, is used for comparison with the tolerable risk criteria.

b) For situations where there is a potential for large numbers of lives to be lost in a single landslide event, estimate the frequency (f) –number (N) of lives lost pairs and total annual risk.

If the possible loss of large numbers of lives from a landslide incident is high, society will generally expect that the probability that the incident might actually occur should be low. This accounts for society's particular intolerance to incidents that cause many simultaneous casualties and is embodied in the criteria for tolerable societal risk. Societal Risk is discussed further in the Commentary.

In many cases there will be more than one landslide hazard (e.g. rockfall, which may lead to one or two lives lost; medium volume rapid landslide which may lead to several lives lost; and large rapid landslide which may lead to many lives lost). The frequency (annual probability, "f") of the "event" and the number of lives lost (N) should be estimated for each landslide hazard.

The total annual risk = $\sum$ (f x N) should also be estimated.

8 RISK ASSESSMENT

8.1 RISK EVALUATION

Evaluate the risks against Tolerable Risk Criteria for loss of life and property loss.

Accept the risks if tolerable, or seek to reduce risks to tolerable levels by risk mitigation.

The main objectives of risk evaluation are usually to decide whether to accept or treat the risks and to set priorities. The Tolerable Risk Criteria are usually imposed by the regulator, unless agreed otherwise with the owner/client

Non- technical clients may seek guidance from the practitioner on whether to accept the risk. In these situations, risk comparisons, discussion of treatment options and explanation of the risk management process can help the client make his decision.

It is desirable, if not essential, that the practitioner who prepared the risk assessment be involved in the decision making process because the process is often iterative, requiring assessment of the sensitivity of calculations to assumptions, modification of the development proposed and revision of risk mitigation measures.

Risk evaluation involves making judgements about the significance and tolerability of the estimated risk. Evaluation may involve comparison of the assessed risks with other risks or with risk acceptance criteria related to finance, loss of life or other values. Risk evaluation may include consideration of issues such as environmental effects, public reaction, politics, business or public confidence and fear of litigation.

In a simple situation where the client/owner is the only affected party, risk evaluation may be a simple value judgement. In more complex situations, value judgements on acceptable risk appropriate to the particular situation are still made as part of an acceptable process of risk management.

8.2 TOLERABLE RISK CRITERIA

The regulator is to establish the Tolerable Risk Criteria for loss of life and property loss.

As discussed in Section 3.5, the regulator is the appropriate authority to set standards for tolerable risk which may relate not only to perceived safety in relation to other risks, but also to government policy. Implementation of a tolerable risk level has implications to the community at large, both in terms of relative risks or safety and in terms of economic impact on the community.

The Commentary provides discussion and gives the AGS recommendations in relation to tolerable risk for loss of life. These are summarized in Table 1

Table 1: AGS Suggested Tolerable loss of life individual risk.

Situation	Suggested Tolerable Loss of Life Risk for the person most at risk
Existing Slope (1) / Existing Development (2)	10^{-4} / annum
New Constructed Slope (3) / New Development (4) / Existing Landslide (5)	10^{-5} / annum