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New Zealand's many severely eroded areas are being vigorously tackled by conservators using a variety of conservation measures. Conservators and engineers have frequently requested that hydrologists determine the effects of these measures on the hydrological regimen and have expressed disappointment that hydrologists are apparently unwilling to do this.

Hydrologists are not, however, neglecting the problem without good reasons; and two major arguments are proffered. Firstly, when hydrologists are able to demonstrate that a given conservation measure has a beneficial effect on a given area, they can reach this conclusion only upon the completion of the conservation works. The implication will naturally be that the conservation method used was of some effect, but it would be incorrect to assume that this is therefore the only or the best method to use. The results prove only that this particular method had an effect which was beneficial. It would be equally incorrect to assume that these findings are applicable in their entirety to another area of supposedly similar nature. It must be stressed that such findings can be applied elsewhere only when climatic, vegetational, geomorphological and pedological conditions are identical.

Secondly, although methodology of hydrological research has advanced rapidly in recent years, hydrologists are still unable to deal with non-stationary processes, that is processes which undergo a continuous change such as a slow but steady improvement on an eroded area.

For these two reasons, some land management research is proposed in Experimental Basins situated away from eroded areas. On such basins conditions can be kept approximately stationary for either long or short periods and results can be treated mathematically to give a better understanding of erosive and hydrological processes. Such understanding will lead to the collection of data which suggest the best possible conservation measure for a given problem — an approach which is surely better than that of applying a conservation method and afterwards attempting to measure its beneficial effects.