

To reduce the number of unassociated phases is an important aspect of the further evaluation of GSETT-2. Techniques for automatic association of regional seismic phases recorded by a single array should be investigated. The use of additional information from local networks, available to NDCs, in the association procedure at EIDCs has to be discussed.

Most important, the unavoidable trade-off between detection threshold and unassociated phases in any seismic network has to be considered within the framework of a future monitoring system.

4.10 Reprocessing experiment

One of the problems encountered during GSETT-2 was that not all data arrived at the EIDCs within the required schedules, and that some data did not arrive at all the EIDCs. After the main phase of GSETT-2 had been completed, the four EIDCs decided to reconcile their databases so as to obtain one complete and agreed database of GSETT-2. They also agreed to reprocess five days' data representative of the seismic activity during GSETT-2. Preliminary results indicate that the products of the EIDCs improved after reprocessing, and that the resulting bulletins are more consistent than was achieved during Phase 3 of GSETT-2. This can be exemplified by the percentage of events in the FEBs common to all EIDCs, which has increased from 40 per cent to 80 per cent.

The results of the reprocessing experiment will be included in the appendices to this report.

4.11 Conclusions

The methods and procedures adopted by the Group for GSETT-2 were in general found to be adequate. Although the EIDCs were unable to review all the wave-form data, some EIDCs were able to review most of the wave-form data sent from the NDCs. The difficulties experienced during GSETT-2 by the EIDCs were due to a number of factors: lack of experience with global network data processing, ambiguities in the GSETT-2 procedures, the unanticipated volume of data, and limited hardware, software and manpower resources.

The review of wave-form data at the EIDCs was found to be useful for improving the quality of the final bulletin.

New methods, specifically developed for routine analysis of wave-form data from a global network, need to be developed and tested. The database collected during GSETT-2 will be of great value for developing these methods and for the seismological evaluation of GSETT-2.

Not all the EIDCs were able to provide easy access to their stored data for the NDCs.

Although some problems became evident, GSETT-2 demonstrated that it was possible to run four EIDCs according to the instructions given for the main phase of the experiment.