

Annex II

REPORT ON "COST ESTIMATES"

This report provides an outline of the steps that will be required to determine a cost-performance relationship for the operation of an international seismic monitoring system under a Comprehensive Nuclear Test Ban. First, an initial cost estimate is provided for GSETT-3, including the cost of equipment that has already been developed under the previous GSE exercises and other national seismic programs. Second, the range of costs are provided for individual seismic installations that could be needed in any future international CTB monitoring network. Third, a list of questions are provided which will need to be answered before realistic estimates of the cost of a CTB international seismic monitoring system can be given.

1. GSETT-3: Since the seismic system for GSETT-3 has not yet been precisely defined, it is premature to give final cost estimates. The total cost will not be known until the experiment is completed. However, considering that a fairly long lead time is required for building and upgrading some new stations, the following provides initial estimates for the exercise.

The global seismic network being planned for the test draws heavily on prior investments in seismic facilities built on a national basis. From costs provided by GSE participants, these investments are roughly estimated to have been 150 MUSD. In addition to these investments, there are additional new costs associated with the planned test. These additional costs include new investments in seismic stations and arrays, communications from these seismic facilities to the International Data Center, and the annual operational cost of the stations, national data centres, and the International Data Center. These estimates of the new costs were developed using information provided by the United States, Sweden, and Japan.

Assumptions on the overall configuration of the GSETT-3 exercise

- Alpha Network

(i) 30 arrays and 20, 3-component stations.

Among them 5 new arrays are to be built and 15 stations are to be upgraded.

Currently available facilities are to be utilized as much as possible.

(ii) One IDC will be used.

- Beta Network

(i) Number of Beta stations: about 100