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PAN AMERICAN  
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AEDES AEGYPTI: REPORT ON THE STATUS OF THE COST-BENEFIT STUDY

The PAHO Study Group on the prevention of Aedes aegypti-borne diseases, which met in February 1970 pursuant to Resolution XXIII of the XIX Meeting of the Directing Council, emphasized the importance of a cost-benefit study for rational decisions on the future strategy for preventing Aedes aegypti-borne diseases.

The Executive Committee, at its 64th Meeting (Resolution VII), authorized a preliminary study, which was carried out between June and September 1970.

The XVIII Pan American Sanitary Conference, after studying the report of the Study Group and the results of the preliminary study, authorized the Director to undertake the study in question, provided it did not entail any increase in the budget, and suggested that efforts be made to obtain voluntary contributions to finance it (Resolution XLIII).

So far, there is little experience with cost-benefit studies in specific public health fields, and the field of study in question is extremely complicated. The complexity is not difficult to understand if we bear in mind the many epidemiological factors involved in the prevention of Aedes aegypti-borne diseases; in essence, the recommendation calls for an evaluation of various choices, the relevancy of which must be based on an analysis of the cost-benefit relationship.

Considerable effort went into the search for well-trained professional personnel with both experience and interest in undertaking the study. The task was difficult since the number of such persons is limited.

In virtue of operative paragraph 1, subsection (b) of Resolution XXIII of the XIX Directing Council requesting the Director "to engage an independent agency to carry out as necessary the study defined by the multidisciplinary group and [to] provide that agency with all assistance needed to obtain the facts and professional technical advice required, presenting an assessment

of the various alternatives - the relevancy of which should be based upon a cost-benefit analysis," the proposal submitted by Arthur D. Little, Inc., of Boston, Massachusetts, was selected. The technical staff of this firm includes persons of recognized capacity and experience in the field of cost-benefit health studies.

After studying the purpose and objectives of the study, as well as the size and specificity of the components, Arthur D. Little, Inc., proposed a study to be carried out in two stages. The first would be devoted primarily to preparing the analytical instruments needed for cost-benefit studies and the second to estimating the effect of various control measures on the incidence of Aedes aegypti-borne diseases.

The first phase will be devoted to:

- a) An examination of the available information, and the construction of quantitative models for the ecology of Aedes aegypti and the epidemiology of Aedes aegypti-borne diseases.
- b) A determination of the relationship that should exist between infestation indices and efforts to control the vector.
- c) An estimation of the impact of control measures (both traditional and experimental) on ecological relationships.
- d) Development of a preliminary economic framework of inter-regional benefits that takes into account the importance of reducing uncertainty about future incidence and reducing average incidence.

The second stage will comprise:

- a) An estimation of the economic impact of Aedes aegypti-borne diseases in a selected area with a well-developed system of case reporting.
- b) An estimation of the impact of control measures on morbidity and mortality using the methods developed in the first stage.

In short, Arthur D. Little, Inc., proposes to undertake a study based on quantitative models of the epidemiology of diseases and the ecology of the vector, to study in a selected area the social costs of the diseases and the impact and cost of different control measures and, finally, to use the data obtained in this way to estimate the economic impact of Aedes aegypti-borne diseases under existing or hypothetical control conditions.

The study is expected to take six months to complete, and a report will be presented one month after completion of the study.

The cost estimate submitted by Arthur D. Little, Inc., for both stages of the study amounts to US\$92,000, of which US\$47,000 would be for the first stage.

Since this cost estimate does not allow for contingencies, it is considered advisable to add US\$8,000 to the estimated US\$92,000, in order to increase the margin of budgetary safety.

At the end of May 1971 a copy of the proposal of Arthur D. Little, Inc., was sent to the Member Countries, which were asked whether they wished to make a voluntary contribution towards the financing of the study.