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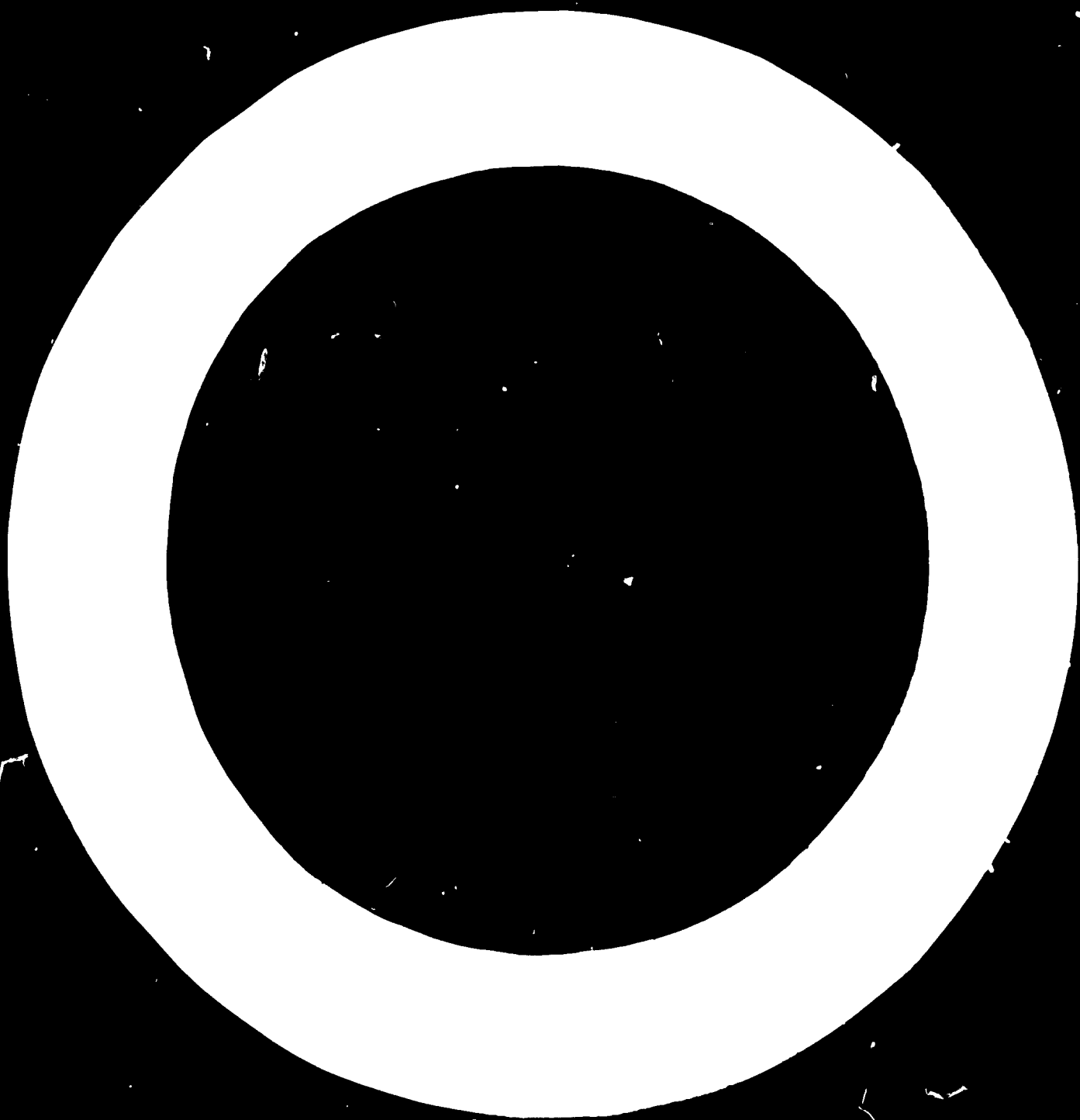
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PREPARING A FERTILIZER PROJECT IN A DEVELOPING COUNTRY

Submitted by the Government of The Netherlands

1/ The Government having submitted a very short paper, it has been treated for purposes of reproduction and distribution as a summary paper and will be distributed in English, French, Spanish and Russian.

67-14880



1. As a starting point it may be assumed that the desirability of the erection of a fertilizer plant in a developing country is sufficiently established: agricultural production needs to be increased, fertilizer consumption is relatively low, the climate justifies the consumption of larger quantities and the country has at its disposal inadequate means to provide for the deficiency by purchase. In the first place, the problems to be solved now are the following:

- (a) What kind of fertilizer should be produced?
- (b) Of what size should the plant be?
- (c) On what site should it be built?
- (d) What raw materials are available?
- (e) What will be the investment and how is it to be realized?
- (f) Will the means to finance the project be obtainable?
- (g) What is the profitability of the project and in what way can the loans raised be repaid?

2. The answers to these questions require extensive preliminary studies. Here we have a constantly recurring problem. Who is to do these studies and bear the costs incurred? As a rule, the country in question does not have at its disposal its own experts, nor sufficient means to attract experts from elsewhere.

3. It then tries, as best it can, to achieve some results by drafting a report with the aid of generally known data, completed with particulars concerning local conditions. The suppliers and the contractor are asked to furnish data, which are sometimes copied without offering any criticism, and after a shorter or longer period a survey and feasibility report is drafted which is to serve as the basis for further actions.

4. One problem, already existing beforehand, is clearly marked by the report: how is the required credit obtained, especially in the case of hard currencies? The answer includes only a limited number of alternatives:

- (a) Private companies or capital owners;
- (b) Governments of developed countries granting credits;
- (c) United Nations institutions.

5. In projects of this nature which are, as a rule, undertaken by the Government of a developing country, there is a strong tendency to apply either to the Government of the countries granting the credits or to the United Nations.
6. Very soon these authorities appear - quite rightly so - to make their own demands regarding expert knowledge, thoroughness and objectivity of the feasibility report and, without putting the submitted feasibility report aside, want to have an investigation made by experts of their own or by independent experts.
7. In general, these authorities do not employ experts commanding sufficient knowledge and experience necessary to make the preliminary studies successfully. In practice, firms active in the relevant field are applied to and requested to provide one or more persons for these studies for a period of some time. This request is usually made with the offer to reimburse part of or all the costs involved.
8. A second possibility, frequently used, is to employ experts - - in most cases supplied by the United Nations - - who are no longer connected with the industry and, often of an older age. They are engaged for the studies as free-lance consultants or in the employ of the United Nations.
9. In either case, the results to be expected will be only moderate. In the first case, however, the support and the aid which can be rendered by a well organized firm will be available. The experts provided will rarely be senior people and in most cases the firm will show little tendency to spend much time and money on the project.
10. In the second case the persons in question will frequently be quite expert but the support of a well equipped organization, which is necessary to give the preliminary studies the required backing, will be lacking.
11. Such a preliminary study, if executed thoroughly, usually involves work for a period of six to twelve months for four to five experts supported by a properly operating organization. It may, for example, consist of:

(a) Study of project:

- (i) demand for fertilizer in the country concerned;
- (ii) demand for fertilizer in the region concerned;
- (iii) choice of fertilizer;
- (iv) raw materials;
- (v) design basis;
- (vi) process description
- (vii) selection of site;
- (viii) water supply;
- (ix) power supply;
- (x) draining situation;
- (xi) transport and communication;
- (xii) personnel.

(b) Study of costs:

- (i) investment estimates;
- (ii) comparative study of costs;
- (iii) cash flow;
- (iv) profitability calculations;
- (v) financing.

(c) General:

- (i) organization;
- (ii) licences;
- (iii) erection programme;
- (iv) specification.

During the study continuous contact is necessary with all parties concerned, either with the country itself or with the financial and technical experts who are to play an active part in an advanced stage of the project, in order that during the preliminary study period the practical attainments are incorporated as much as possible.

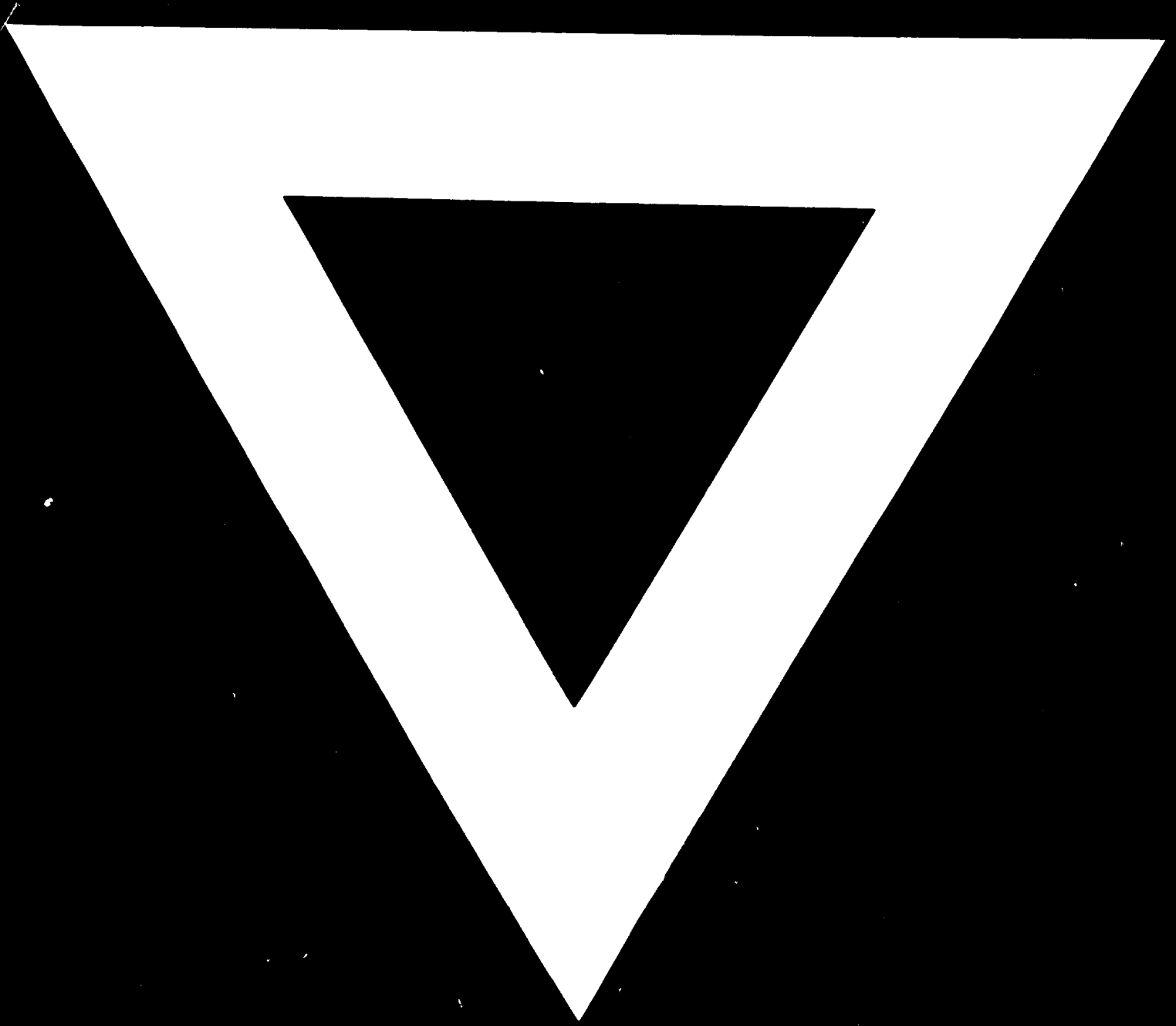
12. If a large company decides to commence a project at some place, it may safely be assumed that the costs incurred by the preliminary studies will be in the magnitude of \$US 250,000 or higher. These companies do not have a reputation of spending money unnecessarily. A thorough preliminary study of a fertilizer project in a developing country will involve costs in the same range. It is obvious that the employment of one or more experts who spend half a year or a whole year on these studies, will hardly lead to the desired end.

13. In order to adopt a better course it will be necessary to realize that the costs involved are much higher than one usually has in mind.

14. This better course might be:

- (a) A basic decision will have to be made with respect to the erection of a fertilizer plant in any country on the grounds of general considerations without an extensive and complete preliminary study having been made;
- (b) Putting renowned companies and/or offices active in the field in charge of such a preliminary study, preferably on the basis of costs plus fixed remuneration, whether or not tied to a guaranteed maximum;
- (c) To obtain correct investment figures, it is advisable to invite offers from renowned contractors for various parts of the project against payment of the costs incurred by the offer;
- (d) Making adequate funds available to realize the points mentioned under (b) and (c).





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