FIRST MEETING.

Held on Monday, February 3rd, 1936, at 11.30 a.m.

1. Opening of the Session.

M. DE VASCONCELLOS, Chairman of the Co-ordination Committee, after having welcomed the experts, reminded them that Proposal IV A contained the following text:

"It is expedient that the measures of embargo provided for in Proposal IV should be extended to the following articles, as soon as the conditions necessary to render this extension effective have been realised:

"Petroleum and its derivatives, by-products and residues."

There followed a list of certain other products. The experts had therefore to consider whether the conditions necessary to render effective the extension of sanctions to petroleum had been realised or not. The Secretariat had prepared a draft agenda, which would be circulated to the experts and which might be taken as a basis of work.

The experts would further remember that, at the last meeting of the Committee of Eighteen, M. Litvinoff had observed that, before any decisions were taken, it would be necessary to ascertain the attitude of certain oil-producing countries not Members of the League. The United Kingdom representative had replied that the experts could, in the meantime, prepare proposals based on certain assumptions and that there was no need to postpone the meeting contemplated. The Soviet delegate had accepted that view.

2. Election of the Chairman.

On the proposal of M. DE VASCONCELLOS (Portugal), M. GOMEZ (Mexico) was unanimously elected Chairman.

3. Publicity of Meetings.

The Chairman proposed that the Committee's meetings should be private, but that it would always be entitled to meet in secret when necessary.

The Chairman's proposal was adopted.

4. List of Documents circulated to the Experts.

M. DE BORDES (Secretariat) enumerated the following list of documents circulated to the experts:

(1) Committee of Eighteen: Resolutions adopted on January 22nd, 1936 (document No.: Co-ordination Committee/109(1)). The present Committee was set up under the second of those two resolutions.

(2) Co-ordination Committee: Principal documents of the first session (October 11th to 19th, 1935) (document No.: Co-ordination Committee/40), giving on page 8 the text of Proposal IV, concerning the embargo on certain exports to Italy.

(3) Committee of Eighteen: Proposals and resolutions adopted during the second session (October 31st to November 6th, 1935) (document No.: Co-ordination Committee/97), giving on page 3 the text of Proposal IV A, concerning the extension of the export embargo to certain products — in particular, petroleum — and the text of Proposal IV B, concerning "indirect supply".

The terms of this proposal showed that the responsibility in regard to the destination of exported goods lay exclusively with the country of origin.

(4) Report of the Committee of Experts to the Chairman of the Co-ordination Committee (document No.: Co-ordination Committee/106 (1)), containing on page 7 a summary of the replies from the different countries concerning the enforcement of the various proposals. The document was dated December 13th, 1935. Since that date, the Committee of Experts had held a further session — last week — and had appended to its second report (document No.: Co-ordination Committee/110) another table differing from the previous table only in the particulars relating to Peru, which country had now put Proposal IV into force.

---

1 Document No.: Co-ordination Committee/97.
2 See page 9.
3 See Official Journal, Special Supplement No. 147, page 12.
4 See pages 12 to 28.
5 See page 29.
The CHAIRMAN asked for the views of the experts on the draft agenda.¹

M. ROSENBLUM (Union of Soviet Socialist Republics) observed that the second item referred to the supply in general of Italy and her colonies, and proposed an additional paragraph to cover the share taken by the different countries in oil supplies to Italy.

M. Rosenblum's proposal was adopted, and the additional paragraph was inserted under letter (d) of point 2 in the draft agenda.

M. ROSENBLUM (Union of Soviet Socialist Republics), referring to the possibility of indirect supply, suggested that a special paragraph should be given to this matter in the Committee's agenda. The question had been left open in the resolution by the Committee of Eighteen, although it was of paramount importance where petroleum was concerned. If petroleum could reach Italy through third countries, any decision that might be taken would be without effect.

M. ASSAN (Roumania) pointed out that this question came within the general framework of sanctions. It was, of course, an important matter, but if, as the expert of the Union of Soviet Socialist Republics had suggested, a door was in fact left open for indirect supply, an attempt should be made to remedy the situation on general lines, without treating the question specially in connection with each particular commodity.

M. ROSENBLUM (Union of Soviet Socialist Republics) replied that he had not raised the general question of indirect supply, which was a matter for the Committee of Eighteen and the Co-ordination Committee. He had considered it from the purely technical point of view, in so far as it concerned the present Committee's mandate. If the experts' task was to make a scientific report on the effectiveness of the enforcement of sanctions, how could so important a question be omitted?

M. JOCHAMOWITZ (Peru) thought that this subject came implicitly under paragraph 2 (c) of the draft agenda: "Possibilities of supply". In dealing with that paragraph, the experts would obviously have to enquire what were the countries which might supply Italy with oil. There were producing and non-producing countries, and, when discussing the item in question, the experts would consider how non-producing countries could supply oil to Italy.

M. ROSENBLUM (Union of Soviet Socialist Republics) suggested that paragraph 2 (c) be completed as follows: "Possibilities of supply, including indirect supply through other countries".

Mr. LOVEDAY, Secretary of the Co-ordination Committee, drew attention to a point which had been omitted in the Secretariat's draft — namely, the question of stocks or possibilities of stocks existing elsewhere than in Italy; for example, in free ports.

M. ROSENBLUM (Union of Soviet Socialist Republics) thought his suggestion would make good the omission pointed out by Mr. Loveday.

The CHAIRMAN suggested that the Committee might agree that, when considering point 3 (stocks existing in Italy and her colonies and possibilities of laying in stocks), it would examine the point raised by Mr. Loveday — namely, possible stocks in free ports.

The Chairman's proposal was adopted.

The Committee adopted its agenda in the following form:

1. Consumption by Italy and her colonies of different petroleum products:
   (a) Normal consumption;
   (b) Present consumption.

2. Supply of Italy and her colonies:
   (a) In normal times;
   (b) In the last few months;
   (c) Possibilities of supply, including indirect supply;
   (d) Participation of the different countries in the supplying of Italy and her colonies.

3. Stocks:
   (a) Stocks existing in Italy and her colonies;
   (b) Possibilities of laying in stocks in Italy and elsewhere.


5. Possibility of substituting other products for petroleum products.

¹ For the final text of the agenda, see below.

The CHAIRMAN stated that the Argentine delegation had written to the Chairman of the Committee of Eighteen to state that it could not take part in the Committee's work, as it had no petroleum expert available at the moment. The delegation would nevertheless follow the Committee's work with great interest.

7. Appointment of Sub-Committees.

After discussion, the Committee decided to appoint two Sub-Committees which would be composed as follows:

1. Sub-Committee on Transport: The experts of the United Kingdom, the Netherlands and Norway;

2. Sub-Committee on Supply and Consumption: The experts of all delegations on the Committee, with the exception of the Norwegian delegation, which had no expert on the question of supply.

SECOND MEETING.

Held on Thursday, February 6th, 1936, at 6 p.m.

Chairman: M. GOMEZ (Mexico).

8. Appointment by the Venezuelan Government of an Observer.

The CHAIRMAN said that M. Zumeta had informed him that it was only because his Government had no technical expert on petroleum in Geneva that it was not represented on the Committee. The Venezuelan Government had, however, accredited M. Zumeta, its representative on the Co-ordination Committee, to the Committee as observer; he would continue to follow the proceedings with the greatest interest.

The Chairman added that, for the moment, the presence of a Venezuelan expert was not indispensable, as the statistics which the Committee had examined showed that Venezuela did not export any petroleum direct to Italy.

9. Work of the Sub-Committee on Transport: Statement by the Chairman of the Sub-Committee.

M. PAUST (Norway), Chairman of the Sub-Committee on Transport, said that that Sub-Committee's written report would be completed by the following morning. He would confine himself to describing broadly the results at which the Sub-Committee had arrived.

The first question which arose naturally for the Sub-Committee was to ascertain the carrying capacity of the Italian oil fleet, should an embargo be imposed by the other nations on the carriage of oil to Italy. The Italian oil fleet was the fourth largest. It consisted for the most part of old vessels, but, as far as could be ascertained, they were in good condition. Bearing in mind the age of those vessels, the Sub-Committee had concluded that the annual carrying capacity of the Italian oil fleet was about 1,750,000 tons. The Sub-Committee had assumed that all the traffic would come through the Gulf of Mexico, and had taken no account of the ports of Venezuela, as that country did not export direct. It had also left out of account small Italian vessels and Italian vessels over thirty years old. There was no doubt, however, that a considerable part of such tonnage could also be used if necessary. In that case, the carrying capacity of the Italian oil fleet would amount to 2,000,000 tons, considering only transport from the ports in the Gulf of Mexico.

The second question examined by the Sub-Committee was to what extent Italy could obtain additional tonnage if the States Members of the League decided to place an embargo on the carriage of oil to that country. The Sub-Committee had considered the position as to the fleets of three countries — Japan, Germany and the United States of America.

With regard to Japan, it would appear to be difficult for her oil fleet to be used for supplying Italy, as it was more or less needed for trade in the Far East.

---

1 On the following day, a Sub-Committee on Substitutes was created, consisting of experts from the United Kingdom, France, the Netherlands, Peru and Sweden.
As for Germany, the Sub-Committee saw no way of preventing her fleet from being diverted to supply Italy with oil if there were sufficient inducements. The carrying capacity which would thus be made available would be 500,000 tons per annum.

The United States oil fleet was very large. The greater part of it was used for American coastwise trade, that trade being reserved for vessels flying the American flag. The Sub-Committee had also left that part of the United States fleet on one side. In addition to the coastwise trade, however, considerable tonnage was used for oversea trade and trade with the ports of Venezuela, Mexico, Cuba and the West Indies. The Sub-Committee concluded that about 300,000 tons gross could be made available from this source for Italian trade, which would increase the means of supplying Italy to 2,000,000 tons per annum in all.

The Sub-Committee had also considered whether, if diverted for Italian trade, American or German tonnage could be replaced by the tonnage of States Members. It had reached the following conclusion. At the present time, about 300,000 tons of oil-tankers were laid up, and half that tonnage could be used for such traffic. In addition, there was a total of 400,000 tons gross under construction, a large part of which would be put into commission in the current year. It would, of course, be very up-to-date material.

Lastly, it would obviously be possible to use tonnage serving other purposes for supplying Italy with oil.

To sum up, should the States Members decide to impose an embargo, there would be no difficulty in replacing entirely, from the German and United States fleets, the loss in oil-carriers to Italy involved by that decision.

The Sub-Committee had also examined the legal aspect of the question, as far as it was able to do so at such short notice. It had concluded that one practical method of imposing an embargo would be, in the first place, to prohibit the sale of vessels belonging to States Members to Italy as well as to non-member States, since otherwise the latter might serve as intermediaries for purchases of the kind, reselling the vessels to Italy.

The Sub-Committee had also concluded that a practical method of applying the embargo would be for each State Member to pass legislation prohibiting vessels flying its flag from entering Italian ports. The Committee fully realised, however, that, unless the United States took part in that general measure, it would be pure waste to introduce such a prohibition and the aim in view would not be achieved. The Sub-Committee regarded that, however, as the only practical way of applying a general measure of the kind.

There was also, at present, a good deal of time-chartering of vessels for American and British charterers, and some difficulty might arise owing to the existence of such contracts if an embargo were imposed by States Members. The vessels in question were mainly Norwegian and Swedish. M. Paust mentioned the fact for what it was worth.

In conclusion, he added that, while the Sub-Committee was quite aware that it would be difficult to achieve the aim in view — to prevent oil supplies from reaching Italy — by that means, such measures would introduce considerable complications into the transport of oil to Italy and would increase the cost.

The CHAIRMAN thought that M. Paust’s statement was sufficiently full for the Committee to exchange views on the question of transport without awaiting the final text of the report.

M. ROSENBLUM (Union of Soviet Socialist Republics) asked whether there were any statistics from which information might be obtained showing what quantities had been carried in Italian bottoms, in 1933 and 1934, out of the total Italian imports of petroleum products.

M. PAUST (Norway), Chairman of the Sub-Committee on Transport, replied that there were no statistics on the subject.

M. FILHOL (France) thought it important to have full details of the work of the Sub-Committee on Transport. The final report would certainly contain important statistics, and it would be best for the experts to wait until they had those figures before them, so as to have full information when discussing the question.

This suggestion having been approved, the discussion on the report of the Sub-Committee on Transport was adjourned.

10. Examination of the Report of the Sub-Committee on Substitutes.

M. JOCHAMOWITZ (Peru), Chairman of the Sub-Committee on Substitutes, said that the work of the Sub-Committee had been conducted in a friendly spirit and quite objectively, the sole purpose being to arrive at the truth, without prejudice and without extraneous preoccupations. The results obtained might be open to criticism, but he could assure the Committee of Experts that every statement made by the Sub-Committee had been maturely weighed and was based upon reliable data. When it was impossible to obtain figures, the Sub-Committee had refrained from even advancing hypotheses. He did not think that any other meeting of persons studying the question in the same objective spirit could arrive at different results.

M. Jochamowitz added that it was a great honour for him to have been invited to preside over the work of the Sub-Committee. The task had been a heavy one, but his work had been
much facilitated by the knowledge of his colleagues. He wished, in the presence of the whole Committee, to thank them for the determination and enthusiasm with which they had carried out their duties. It would be one of his happiest recollections that he had been permitted to work in such an exceptional atmosphere.

The CHAIRMAN congratulated the Sub-Committee, and in particular its Chairman, for its report¹ on a question of which the Committee fully appreciated the difficulty.

M. JOCHAMOWITZ (Peru), Chairman of the Sub-Committee on Substitutes, thanked the Chairman of the Committee of Experts for his appreciative remarks, which should really be addressed to the various members of the Sub-Committee, the duty of its Chairman having been merely to collate and co-ordinate the products of their learning.

M. ROSENBLUM (Union of Soviet Socialist Republics) understood that the report of the Sub-Committee on Substitutes dealt only with petrol substitutes. Could the Chairman of the Sub-Committee say whether substitutes existed for other products, more particularly fuel-oil? That was perhaps a more important question than petrol.

M. PAUST (Norway) said that, in his view, it would be very difficult to find substitutes for fuel-oils. In that connection, there was one rather interesting subsidiary point: oil-burning ships could easily be converted to burn coal. True, such a transformation would force Italy to import more coal, but, assuming that there were no difficulty in importing coal, Italy might be able to do without fuel-oil.

M. JOCHAMOWITZ (Peru), Chairman of the Sub-Committee on Substitutes, said that the Sub-Committee had gone into the question raised by the Soviet expert. It had at first included in its draft report a paragraph as follows:

“5. No substitutes of practical importance exist for oil products, other than petrol, such as crude oil, kerosene, gas-oil, fuel-oil, etc. The only exception is in the case of lubricating oils, of which relatively small quantities only are used and for which certain compositions of vegetable oil can be substituted.”

The Sub-Committee had eventually decided to delete that paragraph, as its study was confined to petrol substitutes. If, however, the Committee of Experts thought it better to restore the text, he did not think that the Sub-Committee would have any objection.

M. SOHLMAN (Sweden) thought that the text in question should be restored, with certain amendments concerning, in particular, lubricating oils. The reference to that point was incorrect, as had been pointed out in the Sub-Committee by the United Kingdom expert: for certain kinds of machinery and engines — internal-combustion engines more particularly — lubricating oils could not be replaced by compositions of vegetable oil.

The CHAIRMAN noted that the Committee was in favour of restoring the paragraph in question, subject to such amendments as might be necessary. The new text might be drafted in consultation with the Chairman of the Sub-Committee on Substitutes.

M. JOCHAMOWITZ (Peru), Chairman of the Sub-Committee on Substitutes, proposed that the drafting of the new text be entrusted to M. Sohlman.

M. Jochamowitz's proposal was adopted.

The continuation of the discussion was adjourned to a later meeting.


Mr. STEVENSON (United Kingdom) asked what would be done with the above report. He pointed out that, in the question of substitutes, the Committee was only dealing with the possibility of the partial replacement of some 15% or 20% of Italy's total consumption of petroleum products. In the circumstances, he doubted whether the whole of the Sub-Committee's report should be embodied in the final report of the Committee. The Committee might, he thought, insert the conclusions, which appeared in paragraph X² and provided a very valuable summary of the report as a whole. The remainder of the document, which was really a statement of reasons, might be appended to the final report, in order to show the grounds on which the Committee had reached those conclusions.

Mr. LOVEDAY, Secretary of the Co-ordination Committee, asked whether the Secretariat was to append the Sub-Committee's report as it stood to the final general report.

M. ASSAN (Roumania) thought that a general decision should be opened which would apply to the reports of all the Sub-Committees. In his view, the general report might include substantial

¹ Document No.: Co-ordination Committee/Petroleum/10. This report eventually became Annex 2 of the general report of the Committee (see Appendix 2, page 73).
² See middle of page 14 of the general report of the Committee (see page 76).
extracts from the reports of the various Sub-Committees; the complete text of those reports could be annexed to the general report, in order to show that they had constituted the Committee’s sources of information.

M. Rosenblum (Union of Soviet Socialist Republics) agreed that it would be well to insert, in the final general report, extracts from paragraph X (Conclusions) of the report of the Sub-Committee on Substitutes, but not the whole of that paragraph. The Secretariat should be given a free hand in the matter of drafting, as might be necessary for the purposes of the general report. He himself would have amendments of detail to suggest, but they might be needless when the Secretariat had framed the draft text with the assistance, if necessary, of a small drafting committee.

The Chairman proposed that, in principle, only the essential passages in the reports of the various Sub-Committees should be embodied in the final general report, for the ultimate text of which the Secretariat would be responsible.

The Chairman's proposal was adopted.

THIRD MEETING.

Held on Friday, February 7th, 1936, at 6 p.m.

Chairman: M. Gomez (Mexico).


In order to put a stop to incorrect reports in the Press, the Committee decided to draw up communiqués for newspapers.


Mr. Guttery (United Kingdom), speaking on behalf of the United Kingdom delegation and of the Netherlands delegation, offered hearty thanks to M. Paust for the firmness and ability with which he had directed the Sub-Committee’s enquiry into the transport question. M. Paust had given a rough outline of the Sub-Committee’s results on the previous day. It might help if Mr. Guttery again briefly adverted to the report.

The Sub-Committee had not been able to base its examination of the carrying capacity of the Italian fleet on previous carryings, because, for the most part, the statistics showed only entrances and clearances. These gave an approximate idea of the movement of tonnage, but did not show the quantities actually carried. The Sub-Committee had therefore had to estimate that capacity with reference to the various factors — tonnage, age and speed of vessels. On a very cautious estimate of speed, the carrying capacity of the Italian fleet from the Gulf of Mexico might be put at 1,750,000 tons per annum. It was even possible, in case of emergency and if the need were sufficiently urgent, that Italy would use the fleet up to its full capacity and might then be able to lift as much as 2,000,000 tons per annum. The Sub-Committee was not in a position to say that such an operation was impracticable, but it could not be more definite on the subject.

For every million tons of oil over and above the 1,750,000 or 2,000,000 tons already mentioned, Italy would have to have the use of 150,000 tons gross of tanker tonnage belonging to other countries. In other words, for every additional million tons she would need fifteen tankers of 10,000 tons gross each. Bearing those figures in mind, the Committee could easily calculate, on the basis of Italy’s requirements of oil, the additional tonnage she would need for the purpose of meeting her oil requirements.

When those calculations had been made, it would be possible to settle the next question that arose — whether, with the help of ships belonging to non-member States, Italy could obtain the use of a sufficient tonnage to carry her necessary oil supplies.

The Sub-Committee had given particulars of the quantities of German and American tonnage that might be diverted to supply Italy, provided that the freight rates were attractive enough to induce shipowners in those countries to divert their tankers from their ordinary routes. Needless to say, such an arrangement would take time and would be expensive.

The Sub-Committee had considered what forms might be taken by an embargo on the transport of oil to Italy, and had indicated which of them would be the most practicable. If

1 See page 43.
2 Document No.: Co-ordination Committee/Petroleum/11. This document eventually became Annex 3 of the general report of the Committee (see Appendix 3, page 77).
such an embargo were imposed, all States Members would have to take early action to prohibit the direct or indirect sale of tankers to Italy. If, however, it were desired to take such action, administrative and legislative difficulties would be encountered. The Sub-Committee had not overestimated those difficulties, but it had to be admitted that they were serious.

M. Rosenblum (Union of Soviet Socialist Republics) said he understood that the Committee was at present engaged in a general discussion, and was not examining the terms of the report, which would be discussed later.

He would like to have further information about the following passage in Section III of the report:

"A prohibition on the proceeding of tankers belonging to Member States to Italy would, of course, apply to vessels already on time-charter and might perhaps raise difficulties for the owners of ships so chartered."

Was the reference to difficulties inherent in charter parties? Was there any difference between an existing contract, which was cancelled owing to an embargo on exports or imports, and a charter party? It would be remembered that, by a decision reached on October 19th, 1935, the Co-ordination Committee had imposed an embargo on existing contracts both for export and for import. Was it to be understood that, in the event of an embargo, special difficulties would arise on account of charter parties?

M. Paust (Norway), Chairman of the Sub-Committee on Transport, said that, at present, a certain number of ships were on time-charter— that was to say, chartered for long periods on terms whereby the charterer could use them throughout the stipulated period on any possible route. That was one of the main clauses in such contracts. If an embargo were imposed on transport to Italy, it would restrict the charterer's opportunities of using his ships and would have the effect of reducing the profits they could make. Charterers might thus be led to ask for a reduction of the agreed rates, or even the cancellation of the contracts. He, personally, did not think that the imposition of an embargo would have that effect, but it was by no means impossible. Everything depended on the wording of the contracts, and also, to a great extent, on the arbitrators, for such contracts usually contained an arbitration clause.

M. Rosenblum (Union of Soviet Socialist Republics) inferred, from this explanation, that the question of existing charter parties was even simpler than that of existing contracts in the event of an embargo on exports and imports. In the latter case, it was known that the application of the embargo automatically put an end to the contract. In the former case, there was merely a possibility. The wording of the passage could perhaps be changed.

He further drew attention to the following sentence in the last paragraph of Section II of the report: "There can be no doubt that the carriage of Italy's supplies of oil in such circumstances would be more difficult to arrange and would be made more expensive". That assertion was not supported by any arguments, and it would be as well to state more clearly, in the final draft, why the carriage referred to would be more difficult to arrange and more expensive.

Mr. Guttery (United Kingdom) said that the Sub-Committee had not thought it necessary to explain that statement, because the reasons for it seemed obvious. If Italy could charter vessels flying any flag, she would clearly be able to obtain additional tonnage more cheaply than if she were confined to one or two flags (German and American).

Mr. Loveday, Secretary of the Co-ordination Committee, observed that, if Italy had any current charter contracts with, for instance, Dutch or British shipowners, and if the contracts were unilaterally denounced by those owners, she might find it profitable to charter German tankers, because, instead of having to pay the freight charges in currencies which had appreciated (sterling or florins), she could pay them in depreciated marks.

Mr. Guttery (United Kingdom) said that that might be so if Italy could obtain the use of a very large German fleet of tankers and pay for it in marks, but she would much more probably have to rely on American tonnage and pay for it in dollars.

The Chairman said that, according to statistics, the German tonnage available was very small, so that in practice the question of payment in marks would not arise.

The answer to the question raised by the expert of the Union of Soviet Socialist Republics followed naturally from the law of supply and demand. In the interests of clearness, however, the final wording of the passage in question might be altered.

M. Assan (Roumania) asked for information in connection with Section IV of the report, which read:

"Cased Oil. — Finally, the Sub-Committee have further considered the question of the prohibition of the carriage to Italy of cased oil in ships belonging to Member States,

1 For the final text of this passage, see page 17 of the general report of the Committee (see page 79).
2 See page 78.
3 See page 79.
and have come to the conclusion that it would be impracticable to prohibit such carriage having regard to the difficulties attached to the administration of any such prohibition."

It was common knowledge that there were no oil-tanks in the ports of Italian Somaliland. In such circumstances, the carriage of cased oil would be specially advantageous. How, then, did the Sub-Committee arrive at the conclusion that the enforcement of such a prohibition would be impracticable? Were there any technical reasons?

Mr. Guttery (United Kingdom) replied that the real difficulty was the number of ships that would be affected. It was possible to watch the movements of tankers, because there were only a limited number of them, but not those of the thousands of tramps which could carry cased oil; there was no knowing at what ports they touched or what cargo they carried. The consequence was that the measure in question could not be dealt with as a shipping sanction, but only as an export sanction.

The Chairman said that, at the time when the problem of indirect supply was examined, it would be necessary to consider the question of road and inland water transport. Could the Sub-Committee on Transport give any information on the point?

M. Paust (Norway), Chairman of the Sub-Committee on Transport, said that, so far as he was in a position to answer the question, the transport of tonnage by those two methods would be too expensive, and also too difficult, to be used to any great extent. That was why the Sub-Committee had not thought it worth while to consider the possibilities in that direction. There were no inland waterways leading into Italy. The facilities for the carriage of oil by rail were also very limited. He understood that they were just sufficient for the distribution of oil products within the home territory, but were out of the question for exports.

M. Van Ommerein (Netherlands) observed that there were obvious possibilities of carriage by inland waterways—for instance, from Rotterdam and Antwerp into Germany, whence the oil could be forwarded by rail. The carrying capacity, however, was somewhat limited, especially in comparison with the capacity for direct carriage by sea. He did not wish to lay too much stress on the cost of such methods of carriage, because it was not a preponderant factor in time of war. The possibilities depended on the number of tank-wagons that could travel from Germany to Italy via Switzerland or Austria. Such traffic was, of course, possible, but only for limited quantities.

The Chairman asked the Sub-Committee on Transport to add a short paragraph on this question to its report, so as to show that it had not been overlooked.

---

FOURTH MEETING.

Held on Saturday, February 8th, 1936, at 12 noon.

Chairman: M. Gomez (Mexico).

14. Work of the Sub-Committee on Supply and Consumption.

The Chairman said that the statistics of imports of petroleum into Italy in 1935 (document No.: Co-ordination Committee/Petroleum/12), just distributed, were based on the Italian import figures and the corresponding figures of the exporting countries. Another document on imports of petroleum into Italy from 1931 to 1934 (document No.: Co-ordination Committee/Petroleum/13) would follow shortly. In the absence of the latter document, he was unable to give a more precise description of the Sub-Committee's work. In any event, the figures collected by the Sub-Committee showed that the introduction of an embargo on the carriage of oil to Italy by the States Members might be effective and might almost stop supplies of oil from reaching Italy, provided the United States of America did not increase their exports above the normal export figures for the preceding years. Were it otherwise, however, and were the United States to increase their production for this purpose, as they could easily do, the embargo might have very little effect.

M. Filhol (France) said that, owing to the complexity of the problems with which they were faced, the Sub-Committees on Transport and Substitutes had felt unable to confine themselves to stating the results of their investigations. As they had been asked to furnish information mainly in an advisory capacity and in order that the Committee of Eighteen might, with a full knowledge of the facts, reach decisions with which the Sub-Committees themselves were not concerned, they had thought it necessary to accompany this information with all the explanations they thought desirable. As experts instructed to deal with technical questions, they had, in other
words, desired to enable the Committee of Eighteen to appreciate at their true worth the documents supplied to it.

Thus, for instance, with regard to possible sources of supply of alcohol, the Sub-Committee had stated in the conclusions of its report that the greater the demand for explosives the less would be the amounts available for motor-fuel.

The importance of these explanations, which, in fact, constituted the justification, as regards the future, for the technical information the experts had been asked to supply, had not escaped the notice of the plenary Committee, for at a recent meeting it had decided to annex the reports of the two Sub-Committees to its general report.

This led the French expert to ask his colleagues whether they did not think that the procedure followed by the first two Sub-Committees should not also be followed by the Sub-Committee meeting that day.

If the Committee agreed with him, the members who had assumed the heavy task of preparing the figures which it would be asked to confirm might be asked to draw up a report, the sole object being, as had just been said, that that report, like the others, should give those who would subsequently have to utilise the experts' figures the necessary information on which to base a sound judgment. Nothing was, in fact, more open to discussion than statistics, and the experts' statistics would certainly be very seriously questioned if they were not explained by means of a permanent document. The Committee had met to approve the figures drawn up by some of its colleagues. M. Filhol was familiar with the source of those figures and was prepared to express his approval. He thought, nevertheless, that, in view of its importance, the technical information supplied by the experts, which would certainly be studied very carefully and very thoroughly by the Committee of Eighteen when it met, and by the public when the material was published, should be accompanied by a report drawn up on the same lines and from the same standpoint as those already presented by the other two Sub-Committees.

M. JOCHAMOWITZ (Peru) was of entirely the same opinion as the French expert. The Committee was an assembly of scientists specially selected by their respective countries. Not only had they a personal responsibility — that would be of little importance — but, above all, they were responsible to their countries. That was why their work must be free from blemish, and the Peruvian expert was convinced it would be.

The questions to be studied had been allocated to various Sub-Committees, and it must be agreed that they had been judiciously allocated. Two reports were already to hand. He could say nothing of the report of the Sub-Committee over which he had presided. On the other hand, he desired to pay a tribute to the Sub-Committee on Transport for its report, which was admirable from all points of view and, in his opinion, quite unassailable.

The various Sub-Committees had been guided by the same principles and had adopted the same methods independently of one another. They had therefore been animated by the same motive: a systematic search after the facts.

If the work of the various Sub-Committees was to be uniform, a third report should be drawn up in the same circumstances, containing data based on the information available, together with the comments and expressions of opinion unavoidably arising therefrom. Those three reports would complete one another, for it would be impossible to reach any conclusion without comparing them, and without them the Committee's work would lack balance.

The Peruvian expert also thought that, in studying the question, the circumstances of the moment must be borne in mind. Those who, later on, would study the reports — and they would certainly be studied with the greatest care — must not be able to criticise the experts for having ignored the circumstances of the moment. All who studied the reports must see what had been the experts' motives — the desire for the truth, and the whole truth.

M. ROSENBLUM (Union of Soviet Socialist Republics) supported the French expert's proposal. The present Committee was composed of technical experts whose duty it was to work as objectively as possible on the problems referred to them. Everybody would want to know along what lines they had worked in reaching their conclusions; explanations must be available on that point. It was for this reason that M. Rosenblum considered that there should be a special report by the Sub-Committee on Supply and Consumption.

Mr. LOVEDAY, Secretary of the Co-ordination Committee, was not quite clear what should be the exact nature of the Sub-Committee's report, if one were drawn up. He had understood that the Committee's general report — and he would be grateful if the matter could be thoroughly discussed — would be divided into two chapters:

1. Supply and consumption, including stocks;
2. Transport.

The first chapter would naturally deal with Italy's normal supplies of oil products and possible sources of supply, together with the question of substitutes. Substitutes would make a comparatively small section of the first chapter. The report of the Sub-Committee on Substitutes would clearly have to be appended in an annex, as that document would show the scientific bases on which the Committee had established its conclusions as set out in the first chapter.

1 See page 46.
For the second chapter, the Committee would have at its disposal the document drawn up by the Sub-Committee on Transport, but it would, perhaps, be more difficult to annex that document, as it stood, to the general report. It would be largely utilised in the general report. It might, for example, be decided to omit the introduction, add certain calculations in the footnotes, etc. There was also a gap which would have to be made good. In the last paragraph of Section 1 of the report of the Sub-Committee on Transport there occurred the following paragraph: 1

"In short, therefore, the position is that, for every million tons of oil in excess of 1 ¾ million tons — or possibly 2 million tons (see above) — which could be carried by the Italian tanker fleet, Italy would require to obtain the use of 150,000 gross tons of tanker tonnage under other flags."

It was clear that the Sub-Committee could not give any more specific information on that subject, since it did not know Italy's consumption in 1935, or the prospects for 1936. That was an unavoidable gap. It would be necessary to add that, if Italy's probable consumption were, for example, 3 or 3 ½ million tons, she would require additional tonnage representing x tankers under other flags.

There was a further question. If the Sub-Committee on Supply and Consumption was to prepare a report, of what should it consist? Was it to repeat the information which would be already set out in Chapter I of the general report? If so, would it be necessary to annex it to that report? If not, of what was it to consist? It might no doubt consist of detailed explanatory notes to the tables to be annexed to the general report. On the previous day, the Committee had received a table of Italian imports compared with the figures of the exporting countries. It would no doubt assist readers if the Committee were to add explanatory notes on its method of calculation and on its reasons for adopting that method. Similarly, explanatory notes might with advantage be added to the table distributed that very day. With such notes, the report would clearly be more complete and more comprehensible. Were such indications, however, what the Committee intended?

Mr. Stevenson (United Kingdom) said the United Kingdom delegation fully agreed with the French delegation on the necessity for having a report from the Sub-Committee on Supply and Consumption, on which the general report would be based. For the general report, the United Kingdom delegation had had in mind a short and simple document, easily understood by all. It believed, moreover, that such was the general feeling of the Committee. It would therefore appear that the general report should contain the conclusions reached by the Committee as the result of a thorough investigation of this difficult problem. On the other hand, it should be shown how the Committee had reached its conclusions and on the basis of what data. That, however, would require a quantity of technical explanations, which it would be preferable to annex to the main report.

The Committee was already in possession of the reports of two Sub-Committees; the Sub-Committee on Supply and Consumption might obviously also be requested to prepare a report. The three documents would be annexed to the general report, which would be quite brief and straightforward.

The transport report should be annexed, as it stood, to the general report, for a particular reason — namely, that the problem of transport by sea was bound up with the problem of stocks. The latter question, however, had not been considered by the Sub-Committee on Transport; it was one for the plenary Committee.

M. Assan (Roumania), while agreeing with the French expert and accepting the considerations put forward by his other colleagues, felt bound to offer certain remarks.

There was, in the first place, the fact that the Sub-Committee on Supply and Consumption consisted, to all intents and purposes, of all the members of the Committee, unlike the two other Sub-Committees, which merely comprised a small number of specialists.

Secondly, the Committee had decided to include in the general report only extracts from the conclusions and from the more important figures contained in the two reports already submitted. The idea was that the general report would consist in the main of the conclusions of the Sub-Committee on Supply and Consumption, the two other reports merely representing a comparatively subsidiary element of the general report.

The statistical report was nevertheless of a somewhat special character: it was full of figures, whereas the two other reports were not. As the United Kingdom expert had said, what was necessary was a short document which would impress the reader; but such a document should not be overloaded with annexes, otherwise its various parts would be out of proportion. The reports of the various Sub-Committees would therefore be treated differently: as regards the first two reports, extracts only would be included in the general report; whereas the report of the Statistical Sub-Committee would constitute the most important part of the general report, together with a short annex on the methods employed.

M. Filhol (France) thanked the experts who had supported his proposal, and desired to explain to Mr. Loveday the reason why he had asked for a report by the Sub-Committee on Supply and Consumption.

The Committee was about to make up its mind in regard to the stocks on hand in Italy. The figure arrived at appeared to be in the neighbourhood of 500,000 tons. If the experts did not state how that figure had been obtained, the question would be at once put to them, and

1 See page 78.
they would be asked why the figure given was not 400,000 or 600,000 tons. They must be able to say that they had taken the statistics of such and such countries, under such and such conditions, and that the amount of the stocks had been deduced therefrom.

The Committee would also have to make up its mind with regard to Italy’s requirements for her expeditionary forces. From the data available, this figure might be estimated at between 25,000 and 35,000 tons per month. According as to which of these figures was correct, there would be a difference of 120,000 tons per annum in Italy’s military requirements. The experts would undoubtedly be asked why they had chosen one or other of those two figures: it was indispensable to explain it.

Not only was it necessary to give such explanations, but it was also absolutely essential to add that the figures had been calculated at the beginning of February with a particular situation in view, as someone studying the experts’ reports three months hence might be faced with quite a different problem, owing to the fact, for example, that the Italians had, in the meanwhile, decided to mobilise ten more divisions, so that the requirements of the Italian army would have to be fixed at a much higher figure than that arrived at by the experts.

Mr. Loveday, Secretary of the Co-ordination Committee, noted that the general report contemplated would be much shorter than the one he had himself had in mind. As one of the experts had suggested, the general report would merely contain the Committee’s final conclusions, but would not contain any reference either to the actual facts or to the assumptions taken as a basis with certain reservations. Such a document would be much more difficult to draft.

Secondly, he thought that, for the report of the Sub-Committee on Supply and Consumption, it might be possible to use the draft which he had that morning dictated for the general report, as his ideas regarding the latter corresponded fairly closely to the present proposals for the Sub-Committee’s report. The text dictated was of course of an entirely preliminary character. It might be used as a basis of discussion.

As regards stocks, he had been obliged to leave the passage blank, as he had been unable to ascertain the figures for consumption in 1935. He assumed that this gap would be filled up by the Committee. The question might be examined during the afternoon.

On the proposal of the Chairman and Mr. Stevenson (United Kingdom), a Drafting Committee, consisting of the experts of France, the United Kingdom, Iran, the Netherlands, Roumania and the Union of Soviet Socialist Republics, was appointed to draft the report of the Sub-Committee on Supply and Consumption.

FIFTH MEETING.

Held on Tuesday, February 11th, 1936, at 10.30 a.m.

Chairman: M. Gomez (Mexico).

15. Examination of the Report of the Sub-Committee on Substitutes (continuation).

The Committee resumed its consideration of the report. ¹

Sections I to IX ² were approved without observations.

After some discussion as to the relative order of Section X ³ (Economies possible as a Result of the Use of Substitutes) and Section XI ⁴ (New text: Products in Replacement of Diesel Oil, Kerosene, Fuel-oil and Lubricating Mineral Oils), it was agreed that a new text should be prepared by M. Jochamowitz, with the assistance of M. de Bordes.

On the subject of Section X, M. Rosenblum (Union of Soviet Socialist Republics), said it was difficult to gather from the text as it stood whether the possible economies were of any real substance or not. The first paragraph spoke of a “material economy”, and the point had been emphasised in the Press. Later, in the same conclusions, however, the possible economy was estimated as amounting to some 110,000 tons per annum, or approximately 3% of the 1935 consumption, which was not a large amount.

¹ Document No.: Co-ordination Committee/Petroleum/10. This report eventually became Annex 2 of the general report of the Committee (see Appendix 2, page 73).
² Paragraphs 1 to 9 of Section II (Petrol) of Annex 2 of the general report of the Committee (see Appendix 2, pages 73 to 75).
³ See the conclusions to Section II of Annex 2 of the general report of the Committee (see Appendix 2, page 76).
⁴ Section III (Petroleum Products other than Petrol) of Annex 2 of the general report of the Committee (see Appendix 2, page 76).
M. JOCHAMOWITZ (Peru), Chairman of the Sub-Committee on Substitutes, replied that in the latter paragraph mentioned by M. Rosenblum reference was made only to the fuels to which Sections I, II and III related—i.e., motor-alcohol, benzol and methyl-alcohol, the only three substitute fuels for which it was possible to give figures. The Sub-Committee's estimates were, in any case, extremely moderate; but, even so, the economy shown was considerable. It was not possible to compare the figure of possible economies with the total consumption, as M. Rosenblum had done. The relation between the 110,000 tons and the actual amount of petrol at Italy's disposal would not be ascertainable until the report of the Sub-Committee on Supply and Consumption had been received.

The Sub-Committee had not failed to consider the possible economies to be effected in petrol as a result of the use of portable gas-generators, compressed coal-gas, hydro-electric power, etc.; but it had found that it was only possible to offer conjectures as to the results of recourse to those means. The Sub-Committee's attention had been drawn to the fact that, under an Italian decree, gas-generators had to be adapted as from a specified date: that might represent an economy of 75,000 tons. On the other hand, it was not possible to estimate the economy that could be realised by increased use of hydro-electric power. The Sub-Committee had thought it wiser not to go beyond the figure of 110,000 tons. That figure might, in fact, be doubled, or even more than doubled, and the economy realised might in the end prove to be as large as a third of the total annual consumption of petrol.

M. FILHOL (France) observed that, in order to meet M. Rosenblum's point, the text of the report might be made a little clearer on the matter.

M. ASSAN (Roumania) thought the points to be emphasised by the Committee in its conclusions should be:

1. That substitutes could not take the place of petrol in the case of aircraft;
2. That the conversion of motor vehicles by the installation of electric batteries, etc., would take considerable time;
3. That substitutes could only take the place of petrol for industrial purposes and for land traffic.

M. JOCHAMOWITZ (Peru), Chairman of the Sub-Committee on Substitutes, said that benzol could be used in aircraft in place of petrol. The factor of time required for the conversion of motor vehicles, to which M. Assan had alluded, was no less indefinite than those other factors to which he himself had already alluded and for which no estimate could be offered.

The CHAIRMAN suggested that the consideration of Section X should be postponed, pending the receipt of the report of the Sub-Committee on Consumption.

*The Chairman's proposal was adopted.*

16. Examination and Adoption of the Revised Text of the Report of the Sub-Committee on Transport.

The Committee examined the revised text of the report of the Sub-Committee on Transport.2

The report was adopted, subject to certain drafting amendments.

17. Examination of the Report of the Sub-Committee on Supply and Consumption.3

Introduction.

M. FILHOL (France) observed that, in some cases, the figures in the report referred to 1934, while, in others, they referred to 1935. It was to be feared that readers insufficiently acquainted with the Committee's methods might infer that the latter had used one or other set of statistics for the good of the cause. To avoid conveying such an impression, it would be advisable that the report should point out, at the very beginning, that the Committee had met early in February 1936—that was to say, at a time when not all the statistics for 1935 were available. In the majority of States, the statistics for a given year were only issued in the second month of the following year. The Committee might state that it had used the figures for 1935 whenever they were available and the figures for 1934 in all other cases.

M. Filhol's proposal was adopted.

(a) Imports.

M. FILHOL (France) asked that products intended for strategic purposes should be added to the list of petroleum and its derivatives used or stored by Italy, in the first paragraph of this Section.
Mr. Starling (United Kingdom) said this expression would be too wide. As regards the air forces, for example, the import statistics might include large quantities of aviation fuel. It was hardly likely that any products, other than bunker-oil for the navy, would be stored outside the Customs' frontiers and thus fail to appear in the import statistics. In the United Kingdom, all such products were included in the import statistics.

M. Filhol's suggestion was adopted in the following form: “for the requirements of the navy”.

(b) Consumption.

M. Jochamowitz (Peru) referred to the next to last paragraph of this Section, regarding which the draft report contained the following note:

“According to the American Committee on Economic Sanctions, ‘petroleum . . . in various front-line and transport uses may attain a military consumption of one ton per capita or more; this rate was closely approached in late 1918 and would have been reached in 1919 had Allied plans held’. (‘Boycotts and Peace: A Report by the Twentieth Century Fund Committee on Economic Sanctions’. New York, 1932; page 174. Quoted in ‘Sanctions’, published by the Royal Institute of International Affairs.)”

The Peruvian expert wished to know whether it was on that basis that the Sub-Committee had assessed the quantity of petrol necessary for the African campaign. If that were so, the figures might, in his opinion, be appreciably higher. During the European war, even at the end, the fronts were relatively near to the centres of supply and the greater part of the transport was by rail. In East Africa, everything had to be sent from Italy and, apart from its tanker requirements, all the army transport had to be effected by motor-lorry. As military operations progressed, the distances from the supply centres increased; this must mean the consumption of very much larger quantities. It might be added that behind the lines a veritable army of engineers was necessary, and that water had to be transported from Italy to the ports and from the ports to the front. The figures of the quantities passed through the Suez Canal could no doubt be taken as a basis, but the surplus might be made up by boats calling at Somaliland without having passed through Suez.

The Chairman added that transport might also take place in cans.

Mr. Starling (United Kingdom) explained that the note in question was intended to indicate that the Sub-Committee’s conclusions had been confirmed by the investigations carried out elsewhere and in other circumstances. It was possible that the Sub-Committee’s calculations were based upon somewhat indefinite data, but even if the figure were increased, it would necessarily not be more reliable.

M. Loveday, Secretary of the Co-ordination Committee, was inclined to think that the note rather weakened the report. The Sub-Committee had reached independently the figure inserted in the text, and it was only afterwards that it had had knowledge of the indications reproduced in the note, confirming its estimate. It was to be feared that a reader not familiar with the Sub-Committee’s discussions would conclude that it had adjusted its figures so as to bring them into agreement with the findings of the American Committee on Economic Sanctions. The figures arrived at by the Sub-Committee would carry greater weight if the note were omitted.

The Committee decided to omit the note.

(c) Stocks.

M. Jochamowitz (Peru) thought it advisable to mention Italy’s possibilities of increasing her storage capacity in 1936. The Italian Decree of October 24th, 1935, which was referred to in the paragraph under consideration, had the effect of considerably reducing the quantities of petrol which dealers had at their disposal for resale; to obtain more than the 30% remaining to them under the terms of the decree, it was probable that they would constitute new reserves, 70% of which they would also have to leave in storage. Mention should also be made of the fact that the Italian Government would certainly construct new storage tanks. The Peruvian expert did not suggest any figures for the increase in stocks which might thus result, but, if the Committee failed to draw attention to them, its report would be incomplete.

M. Filhol (France) concurred. The construction of a cement tank with a capacity of 1,500 to 2,000 tons should not cost more than 150,000 francs. It would not take much time and the expenditure involved was not more than the Italian Government could afford.

Mr. Starling (United Kingdom), while in general agreement with his two colleagues, thought it would be incorrect to convey an impression that it was possible to construct large storage tanks, representing a considerable storage capacity, in a short space of time. The construction of large tanks took a great deal of time and was very expensive.

In reply to a request for information by Mr. Loveday, M. Jochamowitz (Peru) said the figures in the report were based upon up-to-date information. In his opinion, Italy was certainly in process of increasing her storage capacity. It must at least be shown that the Committee had considered the question.
Mr. LOVEDAY, Secretary of the Co-ordination Committee, proposed the following text:

"The Committee would add that the present storage capacity of Italy could, of course, be increased during the course of the present year. Open reservoirs with a limited capacity are not expensive; but normal storage tanks would be appreciably more expensive and would take a considerable time to construct."

*The text proposed by Mr. Loveday was adopted.*

---

**SIXTH MEETING.**

*Held on Tuesday, February 11th, 1936, at 3.30 p.m.*

Chairman: M. GOMEZ (Mexico).

18. **Examination and Adoption of the Report of the Sub-Committee on Supply and Consumption**

(continuation).

(d) **Sources of Supply.**

M. DE VASCONCELLOS, Chairman of the Co-ordination Committee, drew attention to the following passage:

"The Committee considers that, as practically the whole of the output of Venezuelan crude oil is exported for refining elsewhere, including about 15% to 20% to the United States of America, it is desirable to call special attention to the position of Venezuela, particularly as this country has hitherto taken no steps to enforce the embargo on the export of other commodities proposed by the Co-ordination Committee."

He was not competent to discuss this text from the technical standpoint. From the political standpoint, however, it was his duty to ask that the following passage be deleted: "particularly as . . . Co-ordination Committee". It might be interpreted as a quite undeserved criticism. Of the Latin-American countries, Venezuela was one of the most loyal and devoted of the League's collaborators, and its representatives had always taken part, in a spirit of complete loyalty, in League affairs and in furthering relations between the League and Latin America. In the present circumstances, there had undoubtedly been difficulties in connection with the application of sanctions, but the situation must be borne in mind. There had been a purely nominal administration in the country, the head of which had been seriously ill. He had recently died. It was natural that the whole of the administration should have been affected by such a state of affairs. For the purpose of reorganising the administration, the country had recalled various Ministers from Europe, some of whom had been most assiduous and influential collaborators with the League. Some of them were still on their way to Venezuela. He was convinced that they would press for closer co-operation with the League and that the next administration in that country would be prompted by a spirit in complete conformity with League ideas, particularly as to the application of sanctions.

M. de Vasconcellos therefore asked that the passage in question be deleted. It was unfair and, moreover, was not calculated to further the Committee's work. The Venezuelan administration was at present worried by internal questions. It was of the utmost importance, both for the League and the enforcement of sanctions, not to retain a sentence likely to give offence to the League's friends in Venezuela who had always actively supported it. It would suffice to express the hope that Venezuela would join in the efforts of the other Members of the League.

Mr. STARLING (United Kingdom) explained that the United Kingdom delegation, which had been requested by the Committee to prepare a revised draft of this section, had merely collated the documents communicated to it. The sentence in question appeared in the original text and that was why it had been maintained. But the United Kingdom delegation had no objection to complying with the request made by the Chairman of the Co-ordination Committee.

*The Committee decided to delete the passage in question.*

---

1 Document No.: Co-ordination Committee/Petroleum/14. This report eventually became Annex 1 of the general report of the Committee (see Appendix 1, page 67).
M. De Vasconcellos, Chairman of the Co-ordination Committee, thanked the experts for this decision, which was the more satisfactory in that a representative of Venezuela was present as an observer. He also had always rendered great services to the League and would undoubtedly be glad that the passage had been deleted.

M. Rosenblum (Union of Soviet Socialist Republics), referring to a statement in the following paragraph, presumed that the United Kingdom delegation was in possession of information in support of its suggestion that there was no doubt that the capacity of the Italian refineries was not less than 700,000 tons per annum. He himself had information extracted from "Petroleum Industry", showing that the capacity of the Italian refineries was only 350,000 tons.

Mr. Starling (United Kingdom) said there had been a good deal of information in the Press about the capacity of the Italian refineries. It had even been estimated at 1,000,000 tons. Italy might attempt to reach that figure, but at present it was undoubtedly too high. On the other hand, to put it at 350,000 tons would certainly not give an accurate idea of the position. In this matter, as in the matter of stocks, absolutely accurate figures could not be given and estimates must suffice. On the basis of the output of Italian refineries for 1934 and of that for the first nine months of 1935, as high a figure as 700,000 tons would be a conservative estimate. The figures for 1934 were the Italian official figures. On the other hand, to put it at 350,000 tons would certainly not give an accurate idea of the position. Reference was made throughout to tons of "petroleum", but it was not quite clear to what this term referred: crude petroleum, derivatives, fuel-oil, motor-spirit, lubricating oil, etc.

Mr. Filhol (France) was in favour of the figure supplied by the United Kingdom expert. In the chapter by M. Giulio Bosco, entitled "The Italian Resources in Fuel and the Search for Oil", appearing in "Le Pérole et son Economie", published in the Cahiers économiques et sociaux, the following passage occurred:

"As a result of this basic Law (November 2nd, 1933) and the Law of February 5th, 1934, amending the Customs regime relating to the importation of crude mineral oils, the present cracking installations will be replaced by complete refineries capable of producing the greater part of the petroleum derivatives required by the Italian market. It may be anticipated that the Società Naphta (Shell group), which owns the cracking installation at Spezia, will be authorised to make additional extensions, and that the Società Italo-Americana per Petrolio (Standard Oil group) will do the same in the case of its refinery at Trieste. A new refinery will also probably be set up at Naples, where there is already the cracking installation of the B.E.N.I.T. Company recently acquired by the Socony-Vacuum. All these changes will probably lead to alterations in the commercial organisation of the Italian market."

It therefore seemed clear, from the information available, that Italy could handle more than 350,000 tons, and he did not think 700,000 tons too high a figure.

Mr. Loveday, Secretary of the Co-ordination Committee, was under the impression that there had been a suggestion to include a figure for the Albanian production. What was the quantity?

M. Assan (Roumania) replied that it was in the region of 30,000 tons.

M. Jochamowitz (Peru) desired to make a suggestion as to the terminology used in the report. He was anxious that there should be no opening for criticism, but he saw one weak point. Reference was made throughout to tons of "petroleum", but it was not quite clear to what this term referred: crude petroleum, derivatives, fuel-oil, motor-spirit, lubricating oil, etc. It would be impossible, for instance, to ascertain how much motor-spirit Italy had used in 1935. A figure was given for crude petroleum, from which the amount of motor-spirit would have to be calculated; but the amount of motor-spirit obtainable from crude petroleum depended upon the source of the latter. He mentioned motor-spirit specially because the report of the Sub-Committee on Substitutes was based on the amount of motor-spirit required by Italy.

M. Filhol (France), while approving the remarks of his Peruvian colleague, said that Italy's consumption could not be given in the absence of statistics. In particular, the figures for 1935 were missing and perhaps they would never be available. One method would be to take the statistics showing the increase in Italy's consumption down to 1934 and to deduce therefrom the increase for 1935, but the percentage of increase thus obtained would be invalid.

M. Jochamowitz (Peru) agreed that it was very difficult, but, in one way or another, it must be shown that this difficulty had not been overlooked, so as to obviate criticism from uninitiated readers. The point could be explained briefly in two lines.

M. Assan (Roumania) pointed out that that would not be the only gap in the Committee's work. Was it advisable to state, even briefly, that it had not been possible to fill up that particular gap? Would it not be wiser, perhaps, to pass over the missing details in silence?

In this particular case, another question might be examined. In the Sub-Committee on Substitutes, reference had been made to a certain proportion between the amount of motor-spirit used by Italy and the amount which Italy could substitute for it. 700,000 tons per annum had been mentioned as the normal consumption, but that was not brought out by the report. Could that information be added, for instance, in the annexes?
M. ROSENBLUM (Union of Soviet Socialist Republics) observed that it would suffice to refer to the annexes to ascertain the amount of motor-spirit used in Italy.

The Chairman pointed out that, even if the annexes gave the figure for Italian imports, it would not be possible to say exactly how much motor-spirit was consumed, since some of it might have been refined in Italy. In those circumstances, a definition should be given in the report of what the experts understood by “petroleum”, together with an explanation as to why they had been unable to arrive at accurate figures for each product.

M. JOCHAMOWITZ (Peru) and M. ASSAN (Roumania) agreed that a note should be drafted in this sense.

Mr. LOVEY, Secretary of the Co-ordination Committee, thought the matter went further than a mere definition of petroleum. Actually, apart from the statistics of production, all the statistics compiled by the experts involved the summation of unlike entities, because products at different stages of refining were added together. The totals might be thrown out if ratios of the various products to each other were not constant or approximately constant from year to year.

M. FILHOL (France) said that the case was quite a special one. In some countries, comparisons could ordinarily be made by taking import statistics as a basis for consumption. This was impossible in the case of Italy. Italy’s policy with regard to supplies of petroleum had, for four or five years, followed quite different lines. The Italian Government had been faced with a special and, moreover, somewhat unusual economic situation in the matter of petroleum, since the price of fuel-oil throughout the world was undoubtedly lower than that of crude petroleum. For some years, the Italian Government’s policy had been to purchase fuel-oil, a product obtained from “topping”, a process constituting the first distillation, which consisted in extracting the light product, leaving a residue containing the whole scale of heavy products. The Italians had purchased these products obtained from “topping” at a lower price and had distilled them again in order to extract lubricating oil. The residues were cracked to obtain motor-spirit. Thus, the Italian statistics for recent years were by no means the same as the import statistics, and it was very difficult to compare the Italian figures with those of other countries.

M. ASSAN (Roumania) feared that accurate figures could not be obtained by these means. In order to meet the Peruvian expert’s request, it would suffice to extract the figures in the annexed table for exports of motor-spirit and to indicate in a footnote that the figures were not complete. There would be no need, for that purpose, to enter into technical details as to the percentages of Italian motor-spirit.

M. FILHOL (France), while approving the above remarks, said that it was not known how much fuel-oil had been handled, so that it could not be said that the figures supplied by the experts should be increased by x.

M. ASSAN (Roumania) suggested that the report should simply say that the figures should be increased, no percentage being indicated.

M. JOCHAMOWITZ (Peru) thought the public would never be able to understand how complicated the problem was. A passage could, of course, be added, explaining why it was not possible to fix the exact amount of motor-spirit consumed by Italy, but it would suffice to draft a few lines summarising the discussion that had just taken place, in order to give the public an explanation of this unavoidable gap.

Mr. LOVEY, Secretary of the Co-ordination Committee, suggested that the note previously referred to should be inserted at the beginning of the report, with a brief description of the technical difficulties and a remark to the effect that statistical objections were of practical importance only when the proportions in which the various products contributed to the total figures varied from year to year. An examination of the tables would show that the percentages of the various products had not varied much from year to year. Any misunderstandings would be removed if a safety clause of that kind were inserted at the beginning of the report.

M. FILHOL (France) did not altogether agree with Mr. Lovey. Two facts had been noted in all the European countries — namely, that the consumption of lamp-oil had fallen owing to the use of electricity, and that the consumption of motor-spirit had increased owing to the development of the motor industry. Consequently, to take the annual percentage of imports as a basis might be inaccurate. In France, there was no hesitation, when fixing the annual consumption of motor-spirit, in taking the number of motor vehicles and ascribing to them an annual consumption of x. This gave a very approximate figure for the total consumption of motor vehicles, to which was added a figure 2x (usually 10 %) for aviation and stationary engines. Mr. Lovey’s suggestion might be kept in mind and compared with the experts’ figures. Perhaps they would be found to agree.

M. JOCHAMOWITZ (Peru) thought the statement just made was very satisfactory, for in the Sub-Committee he had proposed that, in order to ascertain how much motor-spirit
Italy might consume, and to arrive at an approximate figure, account should be taken of the number of vehicles using motor-spirit. He would readily undertake this work, which, however, would entail some further research.

Mr. STARLING (United Kingdom) agreed that the question was difficult. The table annexed to the report showed that, in 1934, Italy had imported 400,000 tons of motor-spirit and 220,000 tons of crude petroleum. In 1935, the figures were 545,000 tons and 390,000 tons respectively. Even if a figure of the output of the Italian refineries were available, account would also have to be taken of the treatment of fuel-oil, and, as yet, this consumption could not be estimated. That could be done in normal times, but it had been pointed out that, in 1935, Italy had undoubtedly stored part of her imports. It might be assumed that she had stored motor-spirit rather than heavy oils. In these circumstances, any results arrived at were bound to be unsatisfactory, and he thought it better to leave the reader to draw his own conclusions from the experts' tables.

M. FILHOL (France) approved this statement.

M. JOCHAMOWITZ (Peru) said he had only wished to raise the question, but would accept his colleagues' view.

The CHAIRMAN added that it would have been desirable to arrive at more or less accurate figures, but it was difficult, if not impossible, to estimate the number of vehicles. How could statistics be established on the basis of figures varying so much from day to day as those relating to ships passing through the Suez Canal? It would be better to leave the figures as they stood, even if they were open to criticism.

The Committee adopted the following text submitted by Mr. Loveday, to be included as a footnote to the introduction to the report of the Sub-Committee on Supply and Consumption:

"The Committee would draw attention to the fact that statistics of petroleum present special difficulties, owing to the fact that the various petroleum products bought, sold and used may be of varying degrees of refinement. The total statistics of imports or consumption are, for this reason, open to the objection that they involve the addition of non-identical units. This objection is, however, only of practical importance when the proportions in which these various products contribute to the totals vary from year to year."

The report as a whole was adopted.


M. ASSAN (Roumania), referring to the general arrangement of the report, suggested that this should be settled before the text was discussed in detail.

Mr. STEVENSON (United Kingdom) approved this suggestion, stating, at the same time, that, so far as the United Kingdom delegation was concerned, it mattered little whether the reports of the Sub-Committees constituted chapters of the main report or were annexed to it.

M. JOCHAMOWITZ (Peru) thought that the text before the Committee, in so far as it related to the work of the various Sub-Committees, was disjointed and inadequate. It did not give a condensed account of the essentials of their work. Passages had sometimes been taken word for word from their reports, and the reader would not gain a comprehensive idea of the work done. He himself thought that it would be better not to try to summarise the reports, which should remain as they stood. They contained very full information and were not very long.

M. VAN OOMEREN (Netherlands) referred to the Committee's recent discussions on this point. The experts had felt that the Sub-Committees should not draw their own conclusions from their studies, but that these conclusions should appear in the main report. The easiest way to bring out the general considerations embodied in the reports of the three Sub-Committees would be to summarise them in the main report. Those who were interested could refer to the documents, but they should be able to see the conclusions as a whole, which should be adopted by the whole Committee. The Sub-Committee on Transport, for instance, consisted of three experts, and he would not like the plenary Committee's conclusions to have been drafted by the representatives of three countries only. That was why, for practical reasons and for reasons of principle, he proposed that the main report should contain a summary of the contents of the reports of the Sub-Committees and the final conclusions reached by the Committee as a whole. That would be the best way of helping the Co-ordination Committee to make use of the experts' study.

M. ROSENBLUM (Union of Soviet Socialist Republics) said it was of little importance whether the reports of the three Sub-Committees were submitted as chapters of the main report or as annexes. The main question was that of a summary. He was of opinion that, in either case, there should be one, as the uninitiated reader would want to understand the whole problem without having to read twenty-five pages of report.

--- 57 ---

1 Document No. : Co-ordination Committee/Petroleum/15. For the final text of the report, see document No.: Co-ordination Committee/113 (see page 64).

2 See pages 45 and 46.
Mr. Stevenson (United Kingdom) supported this suggestion. It was essential that some kind of a summary should precede the other parts of the report, whether the latter consisted of chapters or annexes. Furthermore, the text of the reports would have to be amended slightly, the expression "Sub-Committee" being replaced by "Committee", for the plenary Committee should shoulder the responsibility for the reports of the three Sub-Committees. As these reports had already been adopted by the plenary Committee, there would actually be little change in the situation.

M. Jochamowitz (Peru) did not object, in principle, to a summary. It would obviously greatly assist the reader who did not want to enter into the details of the Sub-Committee's reports, but his idea of the summary was different from that now submitted. In the present draft, the findings of the three Sub-Committees were too disjointed. For his part, what he had in mind was a summary consisting, not of direct quotations from the reports of the Sub-Committees, but an account of their essential features, thus giving a comprehensive survey. The details would be found in the reports themselves. As to the Sub-Committee on Substitutes, he was prepared to do this work alone or with the co-operation of his colleagues. Similar work could be done for the two other Sub-Committees.

M. Van Ommeren (Netherlands) thought the system hitherto adopted was the best. The Committee had before it the summaries prepared by the Secretariat, which had endeavoured to bring out the most important points in the reports of the three Sub-Committees. That was the most satisfactory method, for those who had drawn up the reports were at a disadvantage in extracting passages from their own texts. It was better that that should be done by persons who had taken no part in drafting the texts. He suggested that the summaries should be made by the whole Committee on the basis of the texts submitted by the Secretariat.

M. Assan (Roumania) proposed that, in the main report, there should first be an introduction drafted in very much the same terms as the present text. The body of the report should consist, not in conclusions, but in extracts giving the main points of the reports of the Sub-Committees. He was not in favour of a summary, as a synthesis of over a week's work could hardly be made in a few hours. Numerous references to the reports of the three Sub-Committees would be added to this text.

M. Westman (Sweden) said that, when, on a previous occasion, the Committee had decided to attempt a summary of the work done, it had had doubts as to the possibility of arriving at a satisfactory result by that method. Now that he had read the present draft, his doubts had been removed, and he believed that a summary of this kind would be very useful. The word "conclusions" might be avoided, as suggested by the Roumanian expert; the word was of little importance, but, if there were no summary of the proceedings, it was to be feared that the reader would lose himself in the details and that many misunderstandings would ensue.

M. De Vasconcellos, Chairman of the Coordination Committee, said that the Committee of Experts might either make each of the reports of the Sub-Committees a chapter of the main report or, as had already been decided, append them as annexes, and give a general summary of the work that had led to particular conclusions. There was no need to be afraid of the word "conclusion", for the Governments actually wanted to know what conclusions the experts had reached, as suggested by the Netherlands expert. There should also be a summary, so that the reader could see all the results obtained by the Committee. However, in drawing up the summary, it would be advisable to bear in mind the observations made by the Peruvian and Roumanian experts.

M. Jochamowitz (Peru), replying to the Netherlands expert, thought, on the contrary, that those who had drafted the reports of the Sub-Committees were well qualified to make extracts or, more correctly, to summarise the reports briefly. On reading the passage concerning substitutes, for instance, he saw at once what was missing.

M. Assan (Roumania) repeated that, in his opinion, there should first be an introduction. It should then be said that the "Committee of Experts considered that . . . " and here, on each point, reference would be made to the report of the Sub-Committee in question. Those reports would be appended as annexes, since any summary would be incomplete.

Mr. Loveday, Secretary of the Coordination Committee, pointed out that the Committee of Eighteen, a political body, had asked for the report. The members of the Committee of Eighteen wanted a convenient report, easy to use during discussions. It should therefore contain a brief account of the experts' proceedings. On the other hand, the members of the Committee of Eighteen should be able, before meeting, to consult their competent departments, and the latter would need, not a summary, but a full account of the calculations and information that had led the Committee of Experts to certain conclusions. The report should therefore serve this two-fold purpose.

M. Filhol (France) noted that the Chairman of the Sub-Committee on Substitutes thought the summary of this Sub-Committee's work was incomplete. It would be only fair to allow that Sub-Committee to prepare a text which would genuinely represent its opinion.

Mr. Stevenson (United Kingdom) suggested that the Sub-Committee on Substitutes might submit a new draft for the passage concerning its work in the main report. The Sub-Committee on Transport had already submitted a new draft for the passage relating to its
own work. Lastly, as to the report of the Sub-Committee on Supply and Consumption, the necessary changes could be made during the plenary Committee's discussions, and there was no need to set up a drafting committee.

After a discussion, the Committee agreed that the members of the Sub-Committee on Substitutes should draft a new text to be submitted to the plenary Committee.

The continuation of the discussion was adjourned to the next meeting.

SEVENTH MEETING.

Held on Tuesday, February 11th, 1936, at 9.30 p.m.

Chairman: M. GOMEZ (Mexico).


(e) Substitutes.

The Committee examined the new text prepared by the Sub-Committee on Substitutes, in accordance with the decision taken by the Committee at its previous meeting.

The new text was approved, in principle, with various amendments and subject to final drafting.

(f) Transport.

A new text submitted by the Sub-Committee on Transport was read.

M. PAUST (Norway), Chairman of the Sub-Committee on Transport, referring to paragraph 2, observed that the figure for the gross tonnage of American tankers not engaged in the coastwise trade was put at 316,000 tons in Lloyd's lists for December to January last, but was estimated at 500,000 in the official report of the United States Shipping Board issued at the end of December 1935. This seemed to show that the tonnage varied according to the season, which explained the remark at the end of the paragraph in question.

As regards the passage concerning special legal difficulties which might arise in certain charter contracts in course of execution, M. ROSENBLUM (Union of Soviet Socialist Republics) pointed out that this particular question had not been discussed by the Co-ordination Committee in October 1935. Its resolution on current contracts was of general scope and should therefore also cover the question of charterings.

M. VAN OMMEREN (Netherlands) pointed out that such charterings were not the same thing as purchase contracts. It was possible that, in connection with an embargo, a dispute might arise between the charterer and the owner of the vessel. It had simply been desired to mention in the report that, in such a case, there would be difficulties between the two parties.

M. ROSENBLUM (Union of Soviet Socialist Republics) replied that the difficulties which arose in connection with the embargo on imports and exports were still greater, but this had not prevented the Co-ordination Committee from adopting its resolution.

Mr. GUTTERY (United Kingdom) said that the difference was that, in October, it was a question of contracts between Italian nationals and nationals of States applying the sanctions which had been considered, whereas, in the present case, it was a question of vessels chartered by nationals of non-member States.

M. WESTMAN (Sweden) supported the Netherlands expert's remarks, and referred in this connection to the report submitted by the Legal Sub-Committee and annexed to document No.: Co-ordination Committee/40.

M. ROSENBLUM (Union of Soviet Socialist Republics) agreed, provided the text only referred to contracts between an Italian and a national of a non-member State. In its present form, the text under discussion would refer to all charterings, this being a general question covered by last October's decision.

Mr. LOVEDAY, Secretary of the Co-ordination Committee, said that the matter had not been mentioned in the draft general report, because it was a legal question within the province of the Committee of Eighteen, and because the latter might say that it had not asked for expert

¹ For the final text of the general report, see document No.: Co-ordination Committee/113 (see page 64).
advice on that subject. On the other hand, the corresponding references had been left in the annexes in order that the matter might come to the notice of the Government experts.

M. PAUST (Norway), Chairman of the Sub-Committee on Transport, thought the general report would not be complete without a reference to the legal difficulty in question. The Committee of Eighteen might suppose that the rules adopted for current purchase contracts applied to cases of chartered vessels also. Those contracts were numerous and covered long periods, some of them even lasting until 1945. The Committee of Eighteen would have to go into the question thoroughly in order to take such action as might be required on the experts’ suggestion.

M. ROSENBLUM (Union of Soviet Socialist Republics) suggested that a reference should be made, in the main report, to the legal difficulties which might arise in connection with those contracts, particularly for the nationals of non-member States.

Mr. GUTTERY (United Kingdom) said that that would not remove all the difficulties which would continue to arise, for example, between Norwegian and British nationals. It would be better not to limit the scope of the reservation, but to keep it in general terms.

M. WESTMAN (Sweden) suggested the following text:

"Notwithstanding the special legal difficulties which might arise in certain cases in connection with tankers already chartered."

The text proposed by M. Westman was approved.

EIGHTH MEETING.

Held on Wednesday, February 12th, 1936, at 11 a.m.

Chairman: M. Gomez (Mexico).


The Chairman opened the discussion on the draft report revised in accordance with the earlier discussions.

Sections I and II of the report were adopted, with drafting amendments.

Findings of the Committee.

The Committee then examined paragraph (4) of the findings of the Committee, in which it was stated that, if an embargo were imposed on petroleum and petroleum products, it should be extended to cover "x", "y" and "z".

M. DE BORDES (Secretariat) submitted a text in which the above letters were replaced by the following list prepared by M. Sohlman (Sweden): "ethyl and methyl alcohol, benzol, toluol, xylol and certain oils of vegetable and animal origin".

Mr. STARLING (United Kingdom) pointed out that the Sub-Committee had not discussed that question officially. It had simply discussed unofficially a list prepared by the Swedish expert. Either that list should be fully examined by the Sub-Committee or preferably, in his view, only the more important substitutes should be specified.

Mr. LOVEDAY, Secretary of the Co-ordination Committee, said the Committee of Eighteen could hardly be left in doubt on this point. If the wording were not sufficiently clear, the Committee of Eighteen should submit the question to experts for further study.

M. WESTMAN (Sweden) was of the same opinion, and, in the Sub-Committee, had made observations in the sense indicated by Mr. Loveday. Nevertheless, under existing circumstances, it was not possible to insert a definitive formula in the text at the present stage, and that submitted by M. Sohlman was not definitive. Whether M. Sohlman’s or an abridged formula were adopted, a complete list would finally have to be drawn up.

M. FILHOL (France) was under the impression that, after examining the question, the Sub-Committee on Substitutes had soon realised that it was impossible to draw up a complete list, in view of the number of products from which alcohol could be made.

1 For the final text of the general report, see document No.: Co-ordination Committee/113 (see page 64).
2 See page 67.
M. SOHLMAN (Sweden) explained that he had endeavoured to draw up a more detailed list. In his opinion, only 75% alcohol should be included; all alcohol for drinking purposes would thus be excluded. Moreover, if an embargo were decided upon, it would be necessary to specify the products covered much more fully than was possible in the present report. That applied, not only to alcohol, but also, for instance, to the various oils which could be used as substitutes for mineral oils. If the present Committee wished to confine itself to a general indication on the lines proposed by the United Kingdom expert or by himself, the Co-ordination Committee would have to have a fuller list drawn up later.

Mr. STARLING (United Kingdom) said the United Kingdom delegation was quite ready to co-operate in the matter, but did not possess a sufficient knowledge of chemistry or of the Customs nomenclature of the various countries to enable it to draw up a complete list. The products of immediate importance were alcohol and benzol. The other products had to be obtained from imported raw materials. If it were found that Italy was importing raw materials for the purpose, it would then be time to supplement the original list.

After discussion, the Committee decided to accept the United Kingdom expert’s suggestion simply to mention alcohol and benzol.

The Committee adopted, subject to certain drafting amendments, the “findings” to be included in the general report.

NINTH MEETING.

Held on Wednesday, February 12th, 1936, at 4 p.m.

Chairman: M. GOMEZ (Mexico).

22. Examination and Adoption, at a Second Reading, of the General Report of the Committee and of its Annexes.

ANNEXES.

The Committee approved the revised texts of Annexes 1 (Supply and Consumption), 2 (Substitutes) and 3 (Transport) to its general report.

GENERAL REPORT.

Section I and Section II (a) Imports, (b) Consumption and (c) Stocks were approved with minor amendments.

Section II (d): Sources of Supply.

M. ASSAN (Roumania) drew attention to the second paragraph of the Sub-Section — namely:

“The largest exporters of oil are Venezuela and the United States of America. The former has not hitherto supplied more than very small quantities direct to Italy, although substantial imports of refined products obtained from Venezuelan crude oil have been imported into Italy via the Netherlands West Indies.”

This wording, he contended, was not clear. The Venezuelan observer would undoubtedly wish to avoid any misunderstanding in this connection.

M. FILHOL (France) agreed. It should be made perfectly clear that Venezuela had no responsibility for exports of refined products of Venezuelan crude petroleum from another country to Italy.

Mr. LOVEDAY, Secretary of the Co-ordination Committee, added that the Venezuelan export figures did not show any consignments of crude petroleum to Italy. The Venezuelan statistics were well known to be extremely complete and detailed, consignments being shown for each country individually and not lumped together under the heading “various countries”.

1 Document No.: Co-ordination Committee/14 (1). For the final text, see page 67.
2 Document No.: Co-ordination Committee/10 (1). For the final text, see page 73.
3 Document No.: Co-ordination Committee/11 (2). For the final text, see page 77.
The CHAIRMAN remarked that the Italian statistics showed imports from Venezuela; there were, however, no Venezuelan statistics for 1935.

Mr. LOVEDAY, Secretary of the Co-ordination Committee, suggested it might be well to make it clear in the text that Venezuela did not show any direct exports to Italy.

After discussion, the Committee adopted the following text:

"The largest exporters of oil are Venezuela and the United States of America. The former reports no direct exports to Italy. "Substantial quantities of Venezuelan crude oil are normally refined in the Netherlands West Indies and refined products are exported from these islands to Italy."

Section II (d) as amended was approved.

Section II (e): Substitutes.

M. JOCHAMOWITZ (Peru) raised again the question of the extent of the economies which Italy could realise by the use of substitutes such as gas-producer plants on motor vehicles, compressed gas or electric power.

Mr. STARLING (United Kingdom) suggested the following text:

"As to the use of substitutes, such as gas-producer plants on motor vehicles, compressed gas or electric power, the Sub-Committee has explained in its report the reasons for which it did not feel able to estimate the extent to which these methods might be utilised in place of motor-spirit. The immediate possibilities would, however, seem to be more restricted than in the case of alcohol and benzol."

M. JOCHAMOWITZ (Peru), referring to the discussion at the previous meeting, said he still remained of a different opinion as to the extent of the economies possible as a result of the use of these substitutes. He proposed to omit the second part of the United Kingdom expert's text. If the Committee did not agree, he wished his own opinion to be recorded in the report.

The CHAIRMAN invited the experts of the United Kingdom, France and Peru to agree upon a text.

The meeting was suspended for a short period, at the conclusion of which the following text was submitted to the Committee:

"The Committee has explained in Annex 2 the reasons for which it does not feel able to estimate the extent to which any further economy might be effected by the employment of other sources of power, such as the use of gas-producer plants on motor vehicles, compressed gas or electric power."

The above text was approved.

The general report was approved, subject to certain amendments of detail.


M. DE VASCONCELLOS, Chairman of the Co-ordination Committee, proposed that the text of the general report, in the form approved by the Committee, should be communicated to the Press as soon as it could be reproduced. There were inevitable leakages as soon as a report was printed. He thought the best plan to ensure the absence of inaccuracies in the text which would appear in the Press was for the Committee to authorise its distribution to the Press at the same time as it was transmitted to Governments.

M. de Vasconcellos' proposal was adopted.


The CHAIRMAN said the Committee had now completed its task. That task had appeared difficult at the opening of the session, but it had proved even more complicated than had been anticipated. Over-optimism was the rule, even among those whose forecast was pessimistic.

Nevertheless, the Committee had successfully completed its task, thanks to the ability and the spirit of mutual understanding exhibited by the experts in the course of a ten-day session, of which he hoped they would all retain pleasant recollections.

He congratulated them on the work done, and thanked them for the honour they had paid him in appointing him Chairman, a post for which he was in no sense worthy.

M. DE VASCONCELLOS, Chairman of the Co-ordination Committee, associated himself with the congratulations to the experts. He thought the Committee should congratulate itself also for having suggested such an eminently successful Chairman as M. Gomez.

1 See page 60.
2 For the final text of the report, see page 64.
The experts' work had been done for the Committee of Eighteen at M. de Vasconcellos' own request; but, in reality, it was work done for the future. It was not the present question that should be kept in mind. It was necessary to look ahead. The work done would count for the future.

M. Filhol (France) was sure he was expressing the feelings of all the members in thanking the Chairman for his assistance in connection with a highly complicated task. The work done might be open to discussion from certain standpoints, but not from the expert standpoint. The experts had worked conscientiously in order to give those who were called upon to take very weighty decisions the information they needed; that information had been supplied to the full measure of their good faith as experts. Their object could not have been better attained than under the chairmanship of M. Gomez.

M. Jochamowitz (Peru) was glad to have been able to work in association with men of such fundamental honesty and so well equipped for their task. He associated himself with M. Filhol's remarks about the Chairman, and would retain a deep impression of the example set by M. Gomez. He did not believe it would be possible to find a gathering which had displayed such tenacity in the pursuit of its objects from the beginning to the end.

He was in Geneva for the first time, and under circumstances which had been quite unexpected. His knowledge of the League of Nations had hitherto been only from without. From now onwards he would be one of its ardent advocates. He was happy to be able to say, in the presence of M. de Vasconcellos, how much he admired the League's work.

The problem submitted to the experts was one of the most complicated and most important problems of the present time. Oil governed the world. In less than ten days, the experts had produced a luminous report containing a very large quantity of information and an analysis of numerous statistics. He did not believe such a result could have been obtained anywhere outside the League. The same work, if entrusted to persons outside the League, however eminent, could never have had the value of what had just been done at Geneva. He was sure each of the experts, on his return to his own country, would champion the League in the same way.

M. Assan (Roumania) was anxious to add, to the warm and well-merited thanks addressed to the Chairman, his congratulations to the members of the Secretariat who had worked hand in hand with the Committee, and to Mr. Loveday in particular.

The Chairman concurred. He had been proposing himself to make a similar declaration. He would only add, in conclusion, that all the merit attached to the results obtained was due to his colleagues.
ANNEX.


REPORT OF THE COMMITTEE OF EXPERTS
FOR THE TECHNICAL EXAMINATION OF THE CONDITIONS GOVERNING
THE TRADE IN AND TRANSPORT OF
PETROLEUM AND ITS DERIVATIVES, BY-PRODUCTS AND RESIDUES

CONTENTS.

REPORT .......................................................... 64
Appendix 1. — Supply and Consumption ........................ 67
Appendix 2. — Substitutes ...................................... 73
Appendix 3. — Transport ....................................... 77
Sub-Appendix I. — Imports of Petroleum into Italy, 1931-1934 ............... 80
Sub-Appendix II. — Imports of Petroleum into Italy, 1935 ................. 82
Sub-Appendix III. — World Production of Petroleum .................... 84
Sub-Appendix IV. — World Oil-Tanker Fleet ........................ 85

I.

At its last meeting on January 22nd, the Committee of Eighteen adopted the following resolution:

"The Committee of Eighteen,

"Recalling its Proposal IV A, of November 6th, 1935, to the effect that measures of embargo should be extended to certain articles as soon as the conditions necessary to render this extension effective had been realised;

"Subject to the proposals which it may see fit to submit on this question to the political decision of Governments:

"Decides to create a Committee of Experts to conduct a technical examination of the conditions governing the trade in and transport of petroleum and its derivatives, by-products and residues, with a view to submitting an early report to the Committee of Eighteen on the effectiveness of the extension of measures of embargo to the above-mentioned commodities;

"Requests its President to invite certain Governments to appoint experts to serve on a Committee for this purpose."
In accordance with the terms of this resolution, the Chairman of the Co-ordination Committee requested certain Governments to send experts to meet in Geneva on February 3rd. The Committee, which met under the chairmanship of M. Gomez (Mexico) from February 3rd to February 12th, was composed of experts designated by the Governments of the United Kingdom, France, Iran, Iraq, Mexico, Netherlands, Norway, Peru, Roumania, Sweden and the Union of Soviet Socialist Republics. The Venezuelan Government sent an observer.

At the opening meeting, the Chairman of the Co-ordination Committee submitted a list of questions to the experts which, after certain minor modifications, was adopted by them as their agenda. The Chairman emphasised the fact that the Committee of Eighteen desired at this stage to submit to a technical examination only the whole problem of the effectiveness of an embargo on petroleum products, and the present report is strictly confined to such a technical examination. By the term "effective", the Committee has understood the influence which this embargo might have on Italy's power to cover the whole or the greater part of her oil requirements. It has not deemed it to be its function to include in its study the whole of the effects—financial, economic and other—that the embargo might have, even were it not to prove completely watertight.

Before setting out the results of its work, the Committee wishes to emphasise at the outset that the facts and the opinions set forth below relate to the situation as it exists to-day or existed in the earlier years to which consideration is given, and that they must not therefore be treated as applying to the future if, in the future, there is any substantial change in general conditions.

In order to distribute its work, the Committee appointed three Sub-Committees to study:

(a) The general problem of consumption and supplies;
(b) The possible use of substitutes;
(c) The question of transport.

II.

After an examination of the reports of its Sub-Committees,\(^1\) which it approved after discussion, the Committee formed the following opinions:

(a) Imports.

The total supplies of petroleum and petroleum products to Italy in the years 1932 to 1934, excluding bunker oil purchases by Italian ships in foreign ports for current needs, amounted on an average to approximately 23½ million tons per annum, of which rather more than 13/4 million tons were fuel oil.

These purchases have increased steadily from a total of about 2 million tons in 1931 to nearly 3 million tons in 1934, a tendency to be found in other principal consuming countries. There was a further increase in 1935, when it is believed that purchases may have amounted to about 3.8 million tons.

Of the increase of 800,000 tons, it will be seen from section (c) below that some 300,000 tons (i.e., about 40% of the increase) is estimated to have been added to stock.

(b) Consumption.

There are no reasons for supposing that Italy was accumulating abnormal stocks of petroleum prior to 1935. It is probable therefore that her consumption of petroleum products up to the end of 1934 was approximately equal to her total purchases. Italy's normal consumption in recent years had increased at the rate of about 13% per annum. Assuming that a similar increase has taken place in 1935 and allowing for some increase in Italian consumption due to greater industrial and military activity, consumption in that year would have amounted to 3.5 million tons. This figure includes the consumption in the theatre of war estimated to amount during the last five months of the year to a figure of 20,000 to 30,000 tons per month.

(c) Stocks.

The total stock at the end of 1934 probably averaged about six weeks' to two months' supply, or 400,000 to 500,000 tons. If to this be added the difference between the purchases and estimated consumption in 1935, amounting to 300,000 tons, a total of 700,000 to 800,000 tons on December 31st, 1935, is obtained. Stocks may have increased during January 1936 by a further 50,000 tons, and, at the end of January, may, therefore, have been equivalent to some two and a half to three months' consumption.

If an embargo were imposed, there would be at the moment of its imposition certain supplies \(en\) \(route\), representing about half a month's supply to be added to the stocks already in hand.

\(^1\) Appendices 1, 2, 3.
(d) SOURCES OF SUPPLY.

The most important sources from which world markets derive their supplies of petroleum are Colombia, Iran, Iraq, Mexico, the Netherlands East Indies, Peru, Roumania, Trinidad, the United States of America, the Union of Soviet Socialist Republics, and Venezuela. All these countries, with the exception of the United States of America, are themselves Members of, or are territories belonging to, Members of the Co-ordination Committee.

The largest exporters of oil are Venezuela and the United States of America. The former reports no direct exports to Italy.

Substantial quantities of Venezuelan crude oil are normally refined in the Netherlands West Indies and refined products are exported from these islands to Italy.

From the figures at the disposal of the Committee, it is clear that the quantity of oil products available for export from the United States of America greatly exceeds Italy's probable demands. In past years relatively small quantities of oil products have been exported from the United States to Italy. In the period 1931 to 1934, the average percentage of Italy's total supplies provided by the United States were as follows:

- Crude oil .............. 14.9
- Petrol ................ 9.4
- Kerosene .............. 5.2
- Fuel oil .............. 3.5
- Lubricating oil ............ 48.3
- Total ................ 6.6

During the last few months, these exports have shown a very large increase. It is not known whether the recent increase in exports will be maintained or whether any form of limitation will, in fact, be instituted. In the case of an effective limitation being imposed, it would make but little difference to the effectiveness of an embargo imposed by States Members of the Co-ordination Committee whether that limitation took the form of an absolute embargo or the reduction of exports to the normal level of the United States exports prior to 1935.

(e) SUBSTITUTES.

Economy in the use of petroleum products by the use of substitutes could most easily be effected in the case of petrol (motor spirit), for Italy has already had some experience in the production and use of such substitutes as alcohol, benzol, etc. The Committee considers that an economy of the order of 100,000 tons a year might be possible by an extension of production of these products in Italy or by increasing imports. Any increase, however, in the demand for alcohol and benzol for the manufacture of explosives would naturally result in a reduction of this figure.

The Committee has explained in Appendix 2 the reasons for which it does not feel able to estimate the extent to which any further economy might be effected by the employment of other sources of power, such as the use of gas-producer plants on motor vehicles, compressed gas or electric power.

As regards Diesel and fuel oils, which form by far the larger part of the oil imports of Italy, the Committee does not consider that any appreciable proportion of these oils could be replaced by substitutes. Some substitution of coal for oil might be practicable provided Italy can import larger quantities of coal.

As regards lubricating oils, it would be possible to replace them to a limited extent by oils of vegetable or animal origin.

In view of the possibility of obtaining by importation substitutes for petrol, the Committee is of the opinion that if an embargo is imposed on petroleum and petroleum products, it should be extended to cover industrial alcohol and benzol.

(f) TRANSPORT.

The Committee estimates that if Italy's supplies of oil had to be drawn from ports in the Gulf of Mexico, the Italian fleet might be expected to carry not less than 1 1/2 million tons (i.e., one-half of Italy's consumption in 1935), or possibly as much as 2 million tons. As stated above, the present consumption is estimated at the rate of about 3 1/2 million tons per annum. If no economies in use were effected, therefore, Italy would require somewhat over 225,000 tons gross of foreign shipping for her transport services.

Were an embargo on transport to be imposed by the Members of the Co-ordination Committee, there would remain for this purpose vessels belonging to the tanker fleets of the United States and Germany. The German tanker fleet that is suitable for transatlantic voyages and from which vessels might be obtained for transportation to Italy would appear to amount to about 90,000 gross tons, and that of the United States which is not engaged in the coastwise trade to between 300,000 and 500,000 gross tons according to the season of the year.

1 See Appendix 1.
If tankers forming part of these two fleets were to be diverted to the Italian trade, there would be nothing, so far as the Committee is aware, to prevent the owners of such vessels from replacing the tonnage so diverted by tankers chartered from other States Members of the Coordination Committee. Tankers of these other States now engaged in the carriage of oil to Italy would become available for this purpose. Moreover, there are at present some 340,000 gross tons of tankers laid up, half of which might be brought into commission, and some 435,000 gross tons of tankers under construction.

For an embargo on transport of oil to Italy to be effective, measures of control would, therefore, require to be taken by countries not members of the League of Nations. On the other hand, even without such measures of control, the carriage of oil to Italy would be rendered more difficult and more expensive were an embargo on transports by Member States to be imposed.

The Committee has given consideration to the question of the possible form of such an embargo. In its opinion, the most practicable form would be one which combined (a) a prohibition against the sale of tankers to States not applying the embargo, and (b) notwithstanding the special legal difficulties which might arise in certain cases in connection with tankers already chartered, a prohibition against the proceeding of tankers to Italy.

Accordingly:

(1) The figures given above with reference to consumption, to stocks and to supplies which might be en route at the moment of the imposition of an embargo on the export of petroleum and petroleum products make it possible to estimate roughly the period which would have to elapse before such an embargo, were it to be universally applied, would become fully effective. In the conditions prevailing at the moment of its session, the Committee is of opinion that this period may be taken to be about three to three and a half months.

(2) In the event of such an embargo being applied by all States Members of the Coordination Committee, it would be effective if the United States of America was to limit its exports to Italy to the normal level of its exports prior to 1935.

(3) If such an embargo were applied by the States Members of the Coordination Committee alone, the only effect which it could have on Italy would be to render the purchase of petroleum more difficult and expensive.

(4) In view of the possibility of substitutes being used to some extent for petrol (motor spirit), an embargo on the export of petroleum and petroleum products would be strengthened were it extended to cover industrial alcohol and benzol.

(5) The effectiveness of an embargo imposed by States Members of the Coordination Committee on the transport of oil to Italy is subject to the same limitations as an embargo on exports. Were these States alone to prohibit the use of tankers for the transport of oil to Italy, it would be able to satisfy its needs up to about 50% from its own resources, and the rest by means of vessels of other States, but with greater difficulty and at greater expense.

(6) If an embargo on transport should be decided on, the Committee is of the opinion that the most practicable form of embargo would be one which would prohibit tankers from proceeding to Italy and would also prohibit the sale of tankers to States not applying the embargo.

(7) Should it be decided to impose an embargo on petroleum, attention should be given to the necessity of taking suitable measures to prevent traffic by indirect routes, including use of free ports, which is of special importance as regards petroleum.

Appendix 1.

SUPPLY AND CONSUMPTION.

The Committee has studied the figures of the sources of Italian petroleum supplies and has endeavoured to estimate Italy's consumption in recent years and the stocks held by her. Wherever possible, the Committee has used statistics for the year 1935, but in regard to certain of the matters dealt with, information for 1935 is not yet available and the Committee has then been obliged to use the figures for 1934.1

1 The Committee would draw attention to the fact that statistics of petroleum present special difficulties, owing to the fact that the various petroleum products bought, sold and used may be of varying degrees of refinement. The total statistics of imports or consumption are, for this reason, open to the objection that they involve the addition of non-identical units. This objection is, however, only of practical importance when the proportions in which these various products contribute to the totals vary from year to year.
(a) IMPORTS.

In Sub-Appendices I and II 1 are given tables showing the Italian imports of petroleum and its derivatives and the exports of these products to Italy from the countries from which she derives her supplies. The Italian import statistics record the entry of goods into Italy when they pass the Customs frontier. As considerable quantities of petroleum and its derivatives are purchased by Italy for use as bunkers in Italian ports, for the requirements of the navy, for refining in the free ports of Fiume and Trieste and, from time to time, for storage in tanks outside the Customs area, the import figures, especially for crude petroleum and fuel oil, do not account for the whole of Italian requirements. It is necessary, therefore, to estimate these requirements from the export statistics of other countries, in so far as they are available.

It would appear, from the evidence afforded by these export statistics, that total purchases in recent years have amounted, on an average, to 2.6 million tons per annum, of which 1.8 million has been fuel oil.2

These figures of total purchases do not generally include bunker oil purchased by Italian vessels in foreign ports for current needs, and it is not possible to make an estimate of the amount of the bunker oil so bought. On the other hand, any purchases of bunker oil by foreign vessels are included. There is no doubt, however, that these foreign purchases in Italian ports are very substantially less than the large Italian bunker purchases abroad.

Exports to Italy have increased steadily, year by year, from a total of 2 million tons in 1931 to a total of nearly 3 million tons in 1934 3 and about 3.8 million tons in 1935. As there was a rapid increase of exports in the autumn of 1935, especially from the United States, and petroleum shipped from the latter country in December would not have arrived until after the new year, arrivals in Italy in 1935 may have been somewhat—perhaps 100,000 tons—less than the export figures would seem to indicate.

(b) CONSUMPTION.

There are no reasons for supposing that Italy was accumulating abnormal stocks of petroleum prior to 1935. Her average working stocks may have increased with the increase in consumption and the extension of refineries; but it is probable that her total consumption up to the end of 1934 was approximately equal to her total purchases, or only slightly less.

It is more difficult to estimate her probable consumption in 1935. Purchases increased between 1931 and 1934 by 45%, which is equivalent to approximately 13% per annum. Had this rate of increase been continued, the consumption in 1935 would have amounted to 3.3 million tons. There were certain factors which would result in an increase in consumption—namely, the increased industrial and military activity in Italy itself, the transport of troops and war material to Italian East Africa, the transhipment of oil from Italy to Italian East Africa. Against these

---

1 As Italian statistics are not available after September 1935, an estimate has been made in Sub-Appendix II for the last quarter of the year based on the tonnage of tankers arriving in Italian ports.
2 The export statistics given in the appendices refer only to the nine most important countries. For the others, it has been necessary to interpolate the Italian import statistics, which, for the reasons given above, are certainly too low.
3 The margin of error in the case of the export figures for petroleum which is mainly carried in special vessels sailing direct to their final destination is probably not great. It will be seen from the following figures that by far the major part of the discrepancy between Italian import statistics and the export statistics given is accounted for by fuel oil, which is largely used as bunkers in seagoing vessels and does not cross the Customs frontier.

<table>
<thead>
<tr>
<th></th>
<th>Italian import statistics</th>
<th>Corresponding export statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average 1932-34</td>
<td>Year 1934</td>
</tr>
<tr>
<td>Crude</td>
<td>135.1</td>
<td>142.9</td>
</tr>
<tr>
<td>Petrol</td>
<td>321.4</td>
<td>348.2</td>
</tr>
<tr>
<td>Kerosene</td>
<td>141.8</td>
<td>144.8</td>
</tr>
<tr>
<td>Residual (fuel oil)</td>
<td>1,010.2</td>
<td>1,122.5</td>
</tr>
<tr>
<td>Lubricating oil</td>
<td>66.3</td>
<td>65.7</td>
</tr>
<tr>
<td>Total</td>
<td>1,074.8</td>
<td>1,824.1</td>
</tr>
</tbody>
</table>

* The annual figures were as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>In tons (ooo's omitted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1931</td>
<td>2,067.7</td>
</tr>
<tr>
<td>1932</td>
<td>2,342.0</td>
</tr>
<tr>
<td>1933</td>
<td>2,368.1</td>
</tr>
<tr>
<td>1934</td>
<td>2,932.2</td>
</tr>
<tr>
<td>1935</td>
<td>3,809.4</td>
</tr>
</tbody>
</table>
increases have to be set some reduction in the consumption of certain oil products, particularly motor spirit, for civilian use. Sufficient data are not available to enable the Committee to assess the value of each of these factors. The increase in consumption due to the greater industrial and military activity in Italy itself may be material; the extra quantity of fuel required for the use of ships engaged in transport to Italian East Africa may not be large, as such oil-burning ships as are concerned would formerly have been engaged in other work.

As regards the total requirements for Italian East Africa, no official information is available, but from various particulars available, including those of the movement of tankers, the Committee is of the opinion that the consumption of petroleum products in those territories during the autumn of 1935 has been of the order of 25,000 to 30,000 tons per month, of which probably some 20,000 tons were motor spirit. The quantity of additional motor spirit required for use in Italian East Africa may possibly have been offset by the economies effected in the use of motor spirit in Italy itself.

Taking all these factors into consideration, the Committee thinks it would not be unreasonable to assume that Italy's aggregate consumption during the course of the year 1935 may have amounted to some 3.5 million tons.

(c) **Stocks.**

There is no direct evidence available as to the stocks of petroleum products in Italy at the end of 1934. They are, however, not likely to have exceeded six to eight weeks' supply or 400,000 to 500,000 tons.

If consumption during 1935 amounted to 3.5 million tons and imports as indicated to 3.8 million tons, the increase in stocks effected during the course of the year would have been 300,000 tons. On the basis of these figures, the total stocks at the end of December last would have amounted to some 700,000 to 800,000 tons.

This estimate is not incompatible with the information available concerning Italy's storage capacity. The Committee believes that the aggregate capacity of existing storage is about one million cubic metres. By a Decree dated October 24th, 1935, all owners and lessees of depots exceeding 500 cubic metres are required to keep stocks of motor spirit and fuel oil equivalent to 70% of the total capacity of their storage accommodation for these products. The tonnage of petroleum and its derivatives which might be held in storage tanks of a total capacity of one million cubic metres depends, of course, on the specific gravity of the products. In view of the nature of the known Italian imports, the co-efficient may perhaps be taken as 0.85, which would give a total storage capacity of 850,000 tons; 70% of this total storage capacity would therefore amount to 600,000 tons. A comparison of this figure with the estimated total stocks at the end of December last—viz., some 700,000 to 800,000 tons—would leave 100,000 to 200,000 tons to be accounted for by storage tanks holding more than the legal minimum required, by storage tanks with a capacity of under 500 cubic metres, by stocks held in tankers and by stocks held in the open.

The Committee would add that the present storage capacity of Italy could, of course, be increased during the course of the present year. Open reservoirs with a limited capacity are not expensive; but normal storage tanks would be appreciably more expensive and would take a considerable time to construct.

On the basis of the records of tankers reaching ports in Italy and the Italian colonies in East Africa during January 1936, the imports during that month may be estimated at slightly under 350,000 tons, which may have rendered possible a further increase in stocks during that month of some 50,000 tons.

Thus, on the basis of data not always adequate and of assumptions sometimes conjectural, the Committee estimates that stocks at the end of January may have amounted to some two and a half to three months' supply at the rate of consumption in 1935. In the case of certain petroleum products, the stocks may suffice for a longer period, and, of others, for a shorter period than this.

If an embargo were to be imposed, supplies in transit to Italian ports representing perhaps half a month's supply would have to be taken into consideration.

(d) **Sources of Supply.**

In considering the available sources of supply, it may be well to distinguish between the sources from which Italy has actually derived her supplies in recent years and the sources which might be tapped under changed conditions. In Sub-Appendix III is given a table of the petroleum production of the world for the last four years. It will be observed that the production of the

---

1 This figure may be somewhat too high if, as is suggested above, arrivals in 1935 were lower than exports.
countries mentioned in this table which are not Members of the Co-ordination Committee is, with the exception of that of the United States of America, quite negligible.

In the following table are shown the exports, specified according to the nature of the product, of the main sources of supply for the international market in the years 1933 and 1934.

**Petroleum: Exports of chief sources of supply.**

<table>
<thead>
<tr>
<th>Source</th>
<th>1933</th>
<th>1934</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Venezuela:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crude oil</td>
<td>16,718</td>
<td>18,780</td>
</tr>
<tr>
<td>Fuel oil</td>
<td>733</td>
<td>805</td>
</tr>
<tr>
<td>Gas oil</td>
<td>59</td>
<td>54</td>
</tr>
<tr>
<td>Petrol</td>
<td>46</td>
<td>47</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>17,556</td>
<td>19,686</td>
</tr>
<tr>
<td><strong>Plus bunker oil for vessels engaged in foreign trade</strong></td>
<td>4,745</td>
<td>4,398</td>
</tr>
<tr>
<td><strong>United States of America:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crude oil</td>
<td>5,088</td>
<td>5,720</td>
</tr>
<tr>
<td>Gasoline</td>
<td>3,214</td>
<td>2,680</td>
</tr>
<tr>
<td>Kerosene</td>
<td>1,102</td>
<td>1,208</td>
</tr>
<tr>
<td>Residual</td>
<td>2,707</td>
<td>3,811</td>
</tr>
<tr>
<td>Lubricating oil</td>
<td>1,081</td>
<td>1,001</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13,192</td>
<td>14,420</td>
</tr>
<tr>
<td><strong>Iran</strong> (1932-33 and 1933-34):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel oil</td>
<td>2,665</td>
<td>3,741</td>
</tr>
<tr>
<td>Crude oil</td>
<td>1,333</td>
<td>1,565</td>
</tr>
<tr>
<td>Kerosene</td>
<td>278</td>
<td>445</td>
</tr>
<tr>
<td>Petrol</td>
<td>1,497</td>
<td>1,524</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5,775</td>
<td>7,275</td>
</tr>
<tr>
<td><strong>Netherlands West Indies: Curaçao and Aruba (Venezuelan oil):</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residues (gas oil, Diesel, Mazout)</td>
<td>9,858</td>
<td></td>
</tr>
<tr>
<td>Gasoline</td>
<td>2,216</td>
<td></td>
</tr>
<tr>
<td>Kerosene (petroleum)</td>
<td>278</td>
<td></td>
</tr>
<tr>
<td>Crude oil</td>
<td>1,203</td>
<td></td>
</tr>
<tr>
<td>Lubricating oil</td>
<td>109</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13,664</td>
<td>14,784</td>
</tr>
<tr>
<td><strong>Roumania:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crude oil</td>
<td>237</td>
<td>274</td>
</tr>
<tr>
<td>Motor spirit</td>
<td>1,757</td>
<td>1,958</td>
</tr>
<tr>
<td>Kerosene</td>
<td>951</td>
<td>1,085</td>
</tr>
<tr>
<td>Gas oil</td>
<td>1,036</td>
<td>1,096</td>
</tr>
<tr>
<td>Fuel and residual oil</td>
<td>1,791</td>
<td>2,021</td>
</tr>
<tr>
<td>Other</td>
<td>59</td>
<td>62</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5,831</td>
<td>6,496</td>
</tr>
<tr>
<td><strong>Union of Soviet Socialist Republics:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crude oil</td>
<td>714</td>
<td>459</td>
</tr>
<tr>
<td>Benzine and motor spirit</td>
<td>1,260</td>
<td>1,120</td>
</tr>
<tr>
<td>Kerosene</td>
<td>570</td>
<td>447</td>
</tr>
<tr>
<td>Gas oil</td>
<td>570</td>
<td>566</td>
</tr>
<tr>
<td>Fuel oil</td>
<td>1,334</td>
<td>1,546</td>
</tr>
<tr>
<td>Lubricating oil</td>
<td>240</td>
<td>305</td>
</tr>
<tr>
<td>Other petroleum products</td>
<td>128</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4,894</td>
<td>4,571</td>
</tr>
<tr>
<td><strong>Netherlands East Indies:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crude oil</td>
<td>248</td>
<td>413</td>
</tr>
<tr>
<td>Residual, fuel and Diesel</td>
<td>2,205</td>
<td>2,118</td>
</tr>
<tr>
<td>Kerosene</td>
<td>451</td>
<td>531</td>
</tr>
<tr>
<td>Benzine and petrol</td>
<td>1,156</td>
<td>1,242</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4,060</td>
<td>4,304</td>
</tr>
</tbody>
</table>

1 Years ending June 22nd.
2 See footnote 2 on following page.
3 In 1933, "crude" includes "other petroleum products".
Metric tons (ooo's omitted)

1933  1934

Mexico:
- Crude oil .............................................. 1,543  1,600
- Fuel oil ..................................................  801  940
- Gas oil ...................................................  210  183
- Gasoline and kerosene .................................  361  456
- Lubricating oil ........................................  40   43

Total ....................................................... 2,961  3,222

Colombia:
- Crude oil ................................................ 1,695  2,351

Iraq:  
- Crude oil ................................................  838

France:
- Crude oil .................................................   —   —
- Petrol .....................................................  17   7
- Other refined oils ......................................  13   16

Residual:
- Gas oil ....................................................  44   60
- Fuel oil ................................................... 115  235
- Road oil ...................................................  30   48
- Lubricating oil .........................................  19   31

Total ......................................................... 238  483

Peru:
- Crude oil ................................................  992  1,352
- Petrol ..................................................... 355  389
- Kerosene ..................................................  31   39
- Fuel oil and gas oil ..................................... 210  196

Total ......................................................... 1,588  1,976

Poland:
- Crude and fuel oil ......................................  4    3
- Petrol .....................................................  50  56
- Kerosene “naphtha” ....................................  45  31
- Lubricating oil .........................................  59  62

Total ......................................................... 158  152

Total of the above countries (all kinds) .............. 76,357 84,956

It will be seen from Sub-Appendix III that there are thirteen countries each of which in 1935 produced over one million tons of crude petroleum. All except one of these, which is the largest producer of all, are Members of the Co-ordination Committee. Two of these countries—namely, the Argentine and India—do not, in normal circumstances, export any oil. The other eleven countries all export substantial quantities; five of them—namely, Venezuela, Iraq, Mexico, Colombia and Peru—export mainly crude oil, and the others—Roumania, Union of Soviet Socialist Republics, Iran, the Netherlands East Indies and Trinidad—mainly export refined products; the United States of America exports large quantities of both crude and refined products. The total exports of these countries was, in 1934, about 66 million tons. Taking crude oil and refined products together, the United States of America and Venezuela are by far the largest exporters.

The sources from which Italy drew her supplies during the year 1934, the quantities being based on the export statistics of the supplying countries, are shown in the following table:

<table>
<thead>
<tr>
<th></th>
<th>Crude %</th>
<th>Petrol %</th>
<th>Kerosene %</th>
<th>Tons (ooo's)</th>
<th>(Crude) %</th>
<th>Petrol %</th>
<th>Kerosene %</th>
<th>Lubricants %</th>
<th>Total %</th>
</tr>
</thead>
</table>
| France               | 54.2    | 24.4     | 21.5       | 92.5        | 49.8      | 73.6     | 17.0       | 9.2          | 355.0   | 17.8
| Roumania             | 64.4    | 29.0     | 21.6       | 92.4        | 44.0      | 63.1     | 17.7       | 5.4          | 973.5   | 23.2
| Union of Soviet Socialist Republics | 54.2 | 24.4 | 21.5 | 92.5 | 49.8 | 73.6 | 17.0 | 9.2 | 355.0 | 17.8 |
| Netherlands East Indies | 64.4 | 29.0 | 21.6 | 92.4 | 44.0 | 63.1 | 17.7 | 5.4 | 973.5 | 23.2 |
| Iran                 | 52.0    | 33.3     | 14.7       | 34.0        | 9.9       | 7.7      | 31.4       | 14.4         | 301.9   | 10.5
| Colombia             | 47.1    | 33.4     | 20.4       | 21.7        | 11.4      | 7.2      | 30.6       | 14.4         | 301.9   | 10.5
| Netherlands West Indies (Curacao and Aruba) | 25.0 | 11.3 | 59.0 | 17.0 | 9.2 | 355.0 | 17.8 | — | — |
| United States of America | 62.0 | 28.0 | 10.0 | 91.0 | 5.0 | 61.9 | 3.1 | 3.2 | 186.3 | 6.4 |
| Other countries      | 52.0    | 33.3     | 14.7       | 34.0        | 9.9       | 7.7      | 31.4       | 14.4         | 301.9   | 10.5
| All countries        | 221.7   | 100      | 95.4       | 100         | 185.7     | 100      | 1991.7     | 100          | 2932.2  | 100 |

1 Exports began only in August 1934.
2 Including 14,784,000 tons from the Netherlands West Indies, 1934, estimated from the 1934 exports from Venezuela to Curacao and Aruba in the ratio which the corresponding exports in 1933 bore to the Netherlands West Indies exports in 1933, thus:

Venezuelan exports to the Netherlands West Indies: \( \frac{14,784,000}{13,664} \times 13,664 = 14,784 \).
It will be seen from this table that the principal sources of supply were Roumania, the Union of Soviet Socialist Republics, the Netherlands West Indies, Iran and the United States of America, which together accounted for 92.6% of the total. Although the statement does not show any direct shipments from Venezuela to Italy, the Italian import statistics include a small quantity.

The exports from the Netherlands West Indies are refined products obtained from Venezuelan crude oil. The Committee considers that, as practically the whole of the output of Venezuelan crude oil is exported for refining elsewhere, including about 15% to 20% to the United States of America, it is desirable to call special attention to the position of Venezuela.

It may be argued that the imposition of an oil embargo would in any event affect the position of Venezuela, since about 80% of its production of oil only reaches the consuming countries through the Netherlands West Indies. But as already pointed out, most of the remaining 20% is sent to the United States for refining and there is no reason why this proportion should not be increased. Any oil exported to the United States would become subject to whatever regime might be applied in the United States to trade with Italy in oil products. There are no technical reasons why Venezuelan crude oil should not be sent direct to Italy for refining. According to the information available to the Committee, the capacity of Italian refineries is probably not less than 700,000 tons per annum.

The statement on page 71 shows that the United States supplied 6.4% of Italy's requirements in 1934. The average for the years 1931-1934 was approximately the same—viz., 168,800 tons out of total purchases by Italy of 2,552,000 tons, or 6.6%.

The details are as follows:

<table>
<thead>
<tr>
<th>Product</th>
<th>Tons (ooo's omitted)</th>
<th>As percentage of Italian total purchases of these products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude</td>
<td>19.6</td>
<td>14.9</td>
</tr>
<tr>
<td>Petrol</td>
<td>34.0</td>
<td>9.4</td>
</tr>
<tr>
<td>Kerosene</td>
<td>10.4</td>
<td>5.2</td>
</tr>
<tr>
<td>Fuel oil</td>
<td>61.2</td>
<td>3.5</td>
</tr>
<tr>
<td>Lubricating oil</td>
<td>43.6</td>
<td>48.3</td>
</tr>
<tr>
<td></td>
<td><strong>168.8</strong></td>
<td><strong>6.6</strong></td>
</tr>
</tbody>
</table>

The position in the United States as regards production, imports and exports is as follows: During the past four years, the output has varied from 107 million tons to 134 millions, the figure for 1934 being 123 million tons. For that year, the imports of crude oil and refined products were 7.1 million tons. The home consumption of the United States was 103.8 million tons and exports were 14.4 million tons, the difference being accounted for by the output of solid products, by refinery losses and changes in stocks. The production of oil in 1935 exceeded that for 1934 by 11 million tons and, with the enormous resources of this country, there is no practical reason why a much larger increase could not be secured without any abnormal development work being undertaken.

Besides importing substantial quantities of crude oil from Venezuela, the United States of America also obtains supplies from Mexico and Colombia.

Assuming that all States Members of the Co-ordination Committee were to co-operate in an oil embargo, the possible sources of supply of petroleum other than those from the United States are quite insignificant. Italian domestic production amounts to 20,000 to 30,000 tons per annum and there is no reason for believing that it could be rapidly increased. Even if supplies were available, they could not be developed without the expenditure of very large sums of money. Production in Albania has only just begun and the amounts likely to be obtained from that source in the immediate future will not, it is believed, prove to be of such importance as materially to affect the position. Moreover, Albanian oil is reported to be of a poor quality. The other countries in which Italy has invested capital in petroleum are Members of the Co-ordination Committee.
Appendix 2.

SUBSTITUTES.

I. INTRODUCTION.

The Committee has examined the possibility of Italy substituting other products for petroleum products and thus effecting an economy in its requirements of petroleum and its derivatives, which would otherwise have to be imported.

The Committee is of opinion that such possibilities exist, but the actual extent of the economy which might be effected will depend on several factors:

(a) The possibility of producing the necessary raw material on Italian territory;
(b) The possibility of importing such raw material from abroad;
(c) The possibility of manufacturing or importing the necessary plant and machinery for the production or utilisation of substitutes;
(d) The time required to secure the production in Italy of large quantities of substitutes, the construction of plants and the transformation of vehicles;
(e) The possibility of financing these various processes and of paying for the necessary imports.

The production of substitutes is generally a costly operation. The financial charge which would, however, devolve upon Italy might vary considerably according to whether the country was able to effect the necessary production within its own territory or was obliged to have recourse to importation.

On the other hand, several of the factors enumerated above are of a non-technical character and fall outside the competence of the Committee. It is impossible, in these circumstances, to make any precise estimate of the total economy which it would be possible for Italy to effect by the use of substitutes.

II. PETROL.

The Committee has specially considered the substitutes for petrol (motor spirit) which may be used in motor vehicles.

The principal substitutes for petrol which, for the purposes of its investigation, the Committee has regarded as of more immediate importance are:

1. Motor alcohol — ethyl alcohol highly concentrated;
2. Benzol;
3. Methyl alcohol (methanol, wood spirit);
4. Generator gas, produced in portable gas generators.

As additional substitutes for petrol which might come under consideration in present circumstances in Italy, the following may be mentioned:

5. Compressed coal-gas;
6. Compressed hydrogen;
7. Shale oil and products of distillation thereof;
8. Use of hydro-electric power either transmitted by wire or by the use of accumulators;
9. Other possible substitutes.

A short résumé is given below of the production and use of these substitutes.

1. Motor Alcohol is used blended with petrol. The percentage of alcohol used in the mixture varies considerably, but up to 25% (by volume) may be used without any adjustment of the motor. Whilst the calorific value of the alcohol mixture is somewhat lower than that of petrol, it has a higher anti-knock value and the overall results are similar.

When a mixture of motor spirit containing more than 25% of alcohol is used, a certain modification of the motor becomes necessary, the degree of adjustment augmenting with the percentage of alcohol. These alterations—a certain pre-heating of the air, adjustment of the fuel inlet to the carburettor, etc.—do not entail any serious difficulties or any great cost. It is even possible, after proper adjustments have been made, to use alcohol alone as motor fuel. In this case, it is, however, necessary, in order to obtain any satisfactory effect or economy, to use a higher degree of compression than that for which the ordinary motors are constructed. This would entail more extensive and costly changes.
In France and Sweden, a mixture of 50% petrol and 50% motor alcohol is used with good technical results for motor-buses.

If alcohol is to be used in motors, it should have a minimum degree of concentration of 99.6%. It is produced from ordinary strong spirits (of 95-96°) by one or other of the various special methods of concentration, viz.:

1. Dehydration with calcium oxide (calcined chalk);
2. Dehydration with gypsum;
3. Distillation with certain salts (acetate of alkalis, etc.): the so-called Hiag method;
4. Distillation with benzol, etc.

Methods (3) and (4) are those principally used; method (2) also is used in Germany.

The manufacture of alcohol both for industrial purposes and as motor fuel is carried on in various countries in Europe on a comparatively large scale, its manufacture being in many countries regarded as a suitable outlet for an existing surplus production of certain agricultural products, or a by-product in certain other manufactures. Thus, the raw material may be potatoes, sugar-beet, corn, grapes, apples and other fruit, molasses, or refuse-lye from the manufacture of sulphite cellulose; technical alcohol is also obtained in the manufacture of yeast and by treatment of sawdust.

In Italy, according to information available to the Committee, five factories working according to method (3) above, with an aggregate yearly capacity of 50,000 to 60,000 tons, have been erected or are under construction.

According to the Zeitschrift für Spiritusindustrie, of January 23rd, 1936, some very large factories for the production of raw alcohol are under construction at present in Italy. The Committee considers that further factories might possibly be erected within a relatively short space of time.

The production of motor alcohol alone has been given in various periodicals for the last year for which figures are available as:

<table>
<thead>
<tr>
<th>Country</th>
<th>Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>160,000</td>
</tr>
<tr>
<td>Czechoslovakia</td>
<td>48,000</td>
</tr>
<tr>
<td>Sweden</td>
<td>14,000</td>
</tr>
<tr>
<td>Austria</td>
<td>8,000</td>
</tr>
<tr>
<td>Hungary</td>
<td>8,000</td>
</tr>
</tbody>
</table>

Alcohol for drinking purposes and for industrial purposes is produced in addition to the above quantities and some part of it might be made available for the production of motor alcohol.

From the information available, it would appear that the Italian production of motor alcohol has hitherto been at the rate of 6,400 tons per year. It is anticipated that in 1936 the quantity of motor alcohol which may be produced will be 40,000 tons. This quantity might possibly be doubled by importation. Reference has already been made to the practice in several countries of utilising the over-production of agricultural products for the production of motor alcohol. As this motor fuel is more costly than petrol, it might be considered advantageous to those countries to dispose of some of their production by export under the circumstances being considered by the Committee.

2. Benzol is used in admixture with petrol, the percentage of benzol in a mixture varying up to a maximum of 40%. The addition of benzol increases the anti-knock value of the fuel and also its power. Benzol mixtures are also used in various countries for aviation purposes, but the maximum percentage in this case would be considerably lower than that already referred to, as benzol has a comparatively high freezing-point.

Benzol is a by-product obtained during the carbonisation of coal at gas-works and coke-ovens and by the distillation of coal tar. The principal producing countries are Germany, United States of America, United Kingdom, France and Belgium. The figures for production during the year 1934 in the case of these countries were as follows:

<table>
<thead>
<tr>
<th>Country</th>
<th>Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>275,000</td>
</tr>
<tr>
<td>United States of America</td>
<td>210,000</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>105,000</td>
</tr>
<tr>
<td>France</td>
<td>74,000</td>
</tr>
<tr>
<td>Belgium</td>
<td>53,000</td>
</tr>
</tbody>
</table>

Italy's own production of benzol in 1934 amounted to about 4,000 tons. An obligation to extract the maximum amount of benzol from the gas produced at gas-works and coke-ovens in Italy might be regarded as a possible means of increasing Italy's own production of benzol.

Italian imports of benzol during the nine months January to September 1935 amounted to 11,600 tons (or about 15,500 tons per annum). In case of need, the total imports might be increased to, say, 25,000 tons, thus making together with Italy's own production an aggregate quantity of about 30,000 tons available to Italy.
3. **Methyl Alcohol** has been used lately in Italy in admixture with petrol and motor alcohol, the proportions used being:

<table>
<thead>
<tr>
<th></th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl alcohol</td>
<td>32</td>
</tr>
<tr>
<td>Methyl alcohol</td>
<td>20</td>
</tr>
<tr>
<td>Petrol</td>
<td>48</td>
</tr>
</tbody>
</table>

This motor fuel is reported as having given very satisfactory results in a motor race (Rome-Paris).

Methyl alcohol, or wood spirit (methanol), is obtained as a by-product from charcoal-ovens and is now also produced synthetically.

The main countries of production are the United States of America, Germany, Canada, Sweden, Finland and Austria.

The figures available to the Committee regarding the production of methyl alcohol, or wood spirit, are rather incomplete and somewhat uncertain; probably they do not include synthetic methanol.

The production in Italy was:

<table>
<thead>
<tr>
<th>Year</th>
<th>Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1931-32</td>
<td>585</td>
</tr>
<tr>
<td>1932-33</td>
<td>1,300</td>
</tr>
<tr>
<td>1933-34</td>
<td>2,500</td>
</tr>
</tbody>
</table>

The production of other countries was:

<table>
<thead>
<tr>
<th>Country</th>
<th>Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany (1933)</td>
<td>2,800</td>
</tr>
<tr>
<td>Sweden (1934)</td>
<td>1,600</td>
</tr>
<tr>
<td>United States of America (1933)</td>
<td>3,000</td>
</tr>
</tbody>
</table>

The total quantity available to Italy in admixture with and as substitute for petrol would probably not exceed 5,000 tons.

4. **Use of Portable Gas Generators.** — Motors driven by gas generated in producers affixed to the vehicle are used in France, Sweden and some other countries, especially in motor lorries and buses. Such generators have also been introduced lately in Italy.

The efficiency of the motor is reduced by some 25-30%, unless compression in the cylinders is increased.

As fuel, various carbonaceous materials may be used—e.g., charcoal, wood or coal.

According to a communiqué issued on August 28th, 1935, the Italian Government is reported to have decided that, before the end of December 1937, all automobiles used in public transport of persons should be either fitted with gas-generator-driven motors or adapted to substitutes for petrol. This transformation, if carried through, might result in an appreciable saving of petrol as motor fuel.

5. **Compressed Coal-gas** has been used in certain countries, in cases of emergency, as a substitute for petrol. Technically, the substitution offers no difficulty whatever. In the case of Italy, a country possessing practically no coal deposits of her own and where the gas produced by the gas-works from imported coal is needed in the first place for illuminating and heating purposes, the use of this gas as a substitute for petrol may be dismissed as not probable on any considerable scale.

6. **Compressed Hydrogen** has been proposed as a possible substitute. Italy, in fact, produces considerable quantities of hydrogen in her electrolytic plants, for the production of ammonia, nitric acid and nitrates.

Motors for the use of hydrogen may, however, be considered as still being, to a large extent, in an experimental stage, and are, it is understood, likely to be rather complicated and costly.

7. **Shale Oil and Products of Distillation thereof.** — The treatment of bituminous shale, deposits of which are to be found in Italy, may yield a certain quantity of oil which may be distilled to yield petrol and other oils. The cost involved in securing any large development of these deposits would be considerable and time would be required, but the Committee thinks it desirable to call attention to the matter.

8. **Hydro-electric Power.** — An extended use of hydro-electric power may have to be reckoned with as a further possibility, for Italy has a large potential capacity for the production of electrical energy.

The substitution of petrol-driven motors by electric power might take the form either of an extended installation of trolley-bus lines or of an increased use of accumulator-driven motor-cars.

The quantity of petrol which might be replaced in this way can, of course, only be a matter of conjecture.

9. **Other Possible Substitutes.** — As is well known, petrol and certain other petroleum products may be produced by synthetic methods from coal, lignite or other carbonaceous materials. The leading countries in the development of the method of production have been Germany, the United Kingdom and France. In these countries, which possess large natural resources in coal and bituminous materials, certain processes of manufacture have, in fact, been developed on an industrial scale, as the result of extensive and extremely costly experiments.
Italy, possessing no coal deposits of her own, has not, however, undertaken any developments in these directions.

A supply of Italian synthetic petroleum products may therefore be regarded as out of the question at present.

Finally, the Committee considers that it should mention the possibility of motor fuels being manufactured from certain products of vegetable or animal origin, such as peanuts, palm-kernels, olives, castor-oil, fish-oils, etc.

* * *

As a result of its investigations, the Committee is of opinion that it would be possible, by the adoption and extension of the use of substitutes for petrol, to effect a material economy in the quantity of motor fuel, which otherwise would have to be imported.

As the Committee has already indicated at the beginning, various considerations have to be taken into account which are of a non-technical character and fall outside the competence of the Committee. It is impossible, in these circumstances, to make any precise estimate of the economy in petrol which it would be possible for Italy to effect by the use of substitute fuels.

As some substitution of imported motor fuels by home-produced fuels is already taking place, it is considered that no serious difficulty would be experienced in expediting this substitution immediately, and that, subject to the problems implicit in the factors mentioned above being satisfactorily resolved, economies of the proportions indicated by the Committee might be obtained within a relatively short time. The cost of substitute fuels will, however, be considerably higher than that of petrol.

In order to give some indication of the extent of the possible economy, taking into account only those substitute fuels in respect of which approximate figures can be given—that is to say, the fuels referred to in Sections 1, 2 and 3 of the present report—the Committee would roughly estimate this at 100,000 tons per annum.

Whatever the possible economy may be, however, it will remain necessary, in any case, for Italy to continue to import considerable quantities of petrol. As was explained above, some of the principal substitute fuels existing at present can only be used by mixing them with larger quantities of petrol, which will have to be imported in any case.

It should, moreover, be added that alcohol and benzol are essential for the production of explosives. In consequence, the greater the demand for explosives, the less alcohol and benzol will be available for motor fuel.

III. PETROLEUM PRODUCTS OTHER THAN PETROL.

Diesel Oil and Kerosene. — As regards substitutes for petroleum products other than petrol, which form by far the larger part of the imports of Italy, no substitutes of any practical importance for Diesel oil and kerosene may be said to exist in Italy, at least at present. It is true that certain fractions of shale oil might be employed as substitutes for Diesel oil and kerosene, but, as set forth in Section 7, the cost and time involved in securing any large development of the shale deposits would be considerable. Kerosene for lighting purposes in lamps, which it is estimated represents rather less than half of the total quantity of kerosene imported, might, in extreme circumstances, be replaced by acetylene, produced—as is well known—from carbide, in carbide lamps. The introduction, however, of such lamps, in themselves rather unsatisfactory substitutes, would take some time and considerable cost. Some additional use of electricity might also be employed for this purpose.

Fuel oil used under boilers by the mercantile marine may in certain cases be replaced by coal without making extensive changes to the furnaces and bunker equipment. In many cases, substitution would involve considerable alterations. The substitution would, of course, mean a corresponding increase of imports of coal. Similar considerations would apply to fuel oils used in Italy for other purposes. In the case of naval vessels, such change of fuel would in most cases be out of the question.

Lubricating mineral oils might to a certain extent be replaced by lubricants made from or containing vegetable oils, such as olive-oil, castor-oil, etc., or animal fats—e.g., fish or whale oil. But for certain purposes, such as the lubrication of high-speed machinery, internal-combustion motors, etc., the general replacement of high-grade mineral lubricants is not regarded as practicable.
Appendix 3.

TRANSPORT.

The Committee has made a technical examination of the conditions governing the transport of oil to Italy.\(^1\)

It appeared to the Committee that the problem could best be dealt with if they considered, first, the capacity of the Italian tanker fleet, secondly, the extent to which it might be possible for tanker tonnage belonging to non-member States to be transferred to the Italian trade and, thirdly, the form of any possible embargo on the use of tankers belonging to Member States for the carriage of oil to Italy, together with the difficulties that might attach to any such embargo.

I. CAPACITY OF THE ITALIAN TANKER FLEET.

Details are attached of the principal tanker fleets of the world as at July 1st, 1935 (see Sub-Appendix IV). The Italian fleet of vessels of 1,000 gross tons and over is there shown as sixty-seven vessels of 329,319 gross tons. It has since been increased, and at January 17th, 1936, is believed to have amounted to eighty-two vessels of approximately 356,000 gross tons. (There are, in addition, the Italian naval tankers, which probably amount to about 70,000 gross tons.)

Of the 356,000 gross tons, 254,000 gross tons are recorded as trading on January 17th last. Of the remainder, 16,000 gross tons are reported as being used as depot ships, 42,000 gross tons as lying at Massowa or Mogadiscio and 36,000 gross tons as laid up or not having moved for two months. The balance of 8,000 gross tons is not reported.

A number of Italian tankers are, because of their age and size, not eminently suited for ocean-going voyages, but if all vessels under 2,000 gross tons and also all vessels over 30 years of age are omitted, a balance of 270,000 gross tons is left, and it must be assumed, in the absence of detailed information as to the actual condition of the individual ships, that this tonnage would be used, if necessary, for transatlantic voyages. It appears that Italy has, during recent months, used a number of these vessels (aggregating 40,000 gross tons) for storage purposes in the Italian colonies in East Africa and a number (aggregating 27,000 gross tons) for the storage of oil in Italy; but there is no reason to think that, if Italy were pressed for tanker tonnage, she would not arrange for any reserve required to be held in less serviceable tankers, or in shore tanks.

The Committee presumes that Italy would, under the pressure of a great emergency, make arrangements for increased storage of oil in shore tanks, so as to release further tanker tonnage for the carriage of oil to Italy. If this were done, it is possible that the Italian tanker tonnage which could be sent over the Atlantic for oil supplies might even be as high as 320,000 gross tons. It is certainly not possible for the Committee to say that this could not be done if the Italian need were sufficiently great.

Ordinarily, it could be assumed that a speed of 200 or more miles per day would be attained by a fleet of tankers, but having regard to the average age of the Italian fleet, the Committee thought it well to assume that, on average, the vessels would not do more than 180 miles per day at sea. Allowing reasonable time for loading, unloading, repairs, etc., this would mean that the ships, if running between Italy and the United States Gulf ports, would, on average, make 4.75 instead of a normal 5 or 6 voyages per year.

The average cargo-carrying capacity of a tanker is approximately one-third more than her gross tonnage. The Committee is accordingly led to the conclusion, on the information available to it, that, if the Italian supplies of oil had to be drawn from the Gulf and 270,000 gross tons were put into the transatlantic trade, the Italian fleet might be expected to carry not less than about 13/4 million tons of oil from the Gulf to Italy in a year. If, however, as much as 320,000 gross tons were put into the transatlantic trade, and the Committee cannot say that this would be impossible, then the Italian tanker fleet would carry as much as 2 million tons a year.

The Committee has not overlooked the fact that about 20,000 gross tons of tankers are required for the carriage of oil (estimated to amount to 25,000 to 30,000 tons per month) from Italy to its colonies, but it seems probable that the tonnage which has been left out of account above

\(^1\) Throughout this chapter, any reference to Italy should be read as including Italy and its East African possessions.

\(^2\) Including eight vessels under 1,000 gross tons.
would be sufficient for this, even if as much as 320,000 gross tons were put into the transatlantic trade.

Vessels under other flags which might be employed in the carriage of oil to Italy from the Gulf could reasonably be expected to make at least five voyages a year, and the carriage of 1,000,000 tons of oil to Italy in such vessels would mean the employment for a year of tanker tonnage of about 150,000 gross tons (cargo-carrying capacity, 200,000 tons).

In short, therefore, the position is that for every million tons of oil in excess of 1\(\frac{3}{4}\) million tons—or possibly 2 million tons (see above)—which could be carried by the Italian tanker fleet, Italy would require to obtain the use of 150,000 gross tons of tanker tonnage under other flags.

II. AVAILABILITY OF NON-ITALIAN TONNAGE.

As regards the second question—i.e., the extent to which tanker tonnage belonging to non-member States might be used for the carriage of oil to Italy—details of the fleets in question will be found in Sub-Appendix IV. The three principal fleets are those of the United States of America, Japan and Germany, and it has not been thought necessary to consider the fleets of the other non-member States, as these fleets are very small.

The Japanese tanker fleet is constantly being kept trading in the Far East, and the Committee considers it altogether unlikely that this fleet, or part of it, would be diverted to Italian trade.

The German tanker fleet is at present practically entirely engaged in trade to Germany, where the German tankers presumably are at an advantage to-day compared with foreign tankers, on account of exchange difficulties. The Committee does not, however, know of any measures which would prevent German owners from diverting this tonnage to Italian trade, if they were given sufficient inducement in the shape of higher freight rates. The German tanker tonnage that is suitable for transatlantic voyages would appear to amount to about 90,000 gross tons.

As regards the United States tanker fleet, a report issued by the United States Shipping Board Bureau on September 30th, 1935, states that, on that date, 258 tankers of 1,721,648 gross tons were employed in the coastwise trade, and 69 tankers of 526,962 gross tons in nearby and overseas foreign trades. As, however, the amount of tanker tonnage employed in the United States coastwise trade tends to increase in the winter months, the Committee has examined the reported movements of United States tankers in the months of December 1935 and January 1936, and has found that, in this period, the number of tankers employed in foreign trades had fallen to 43 tankers of 316,000 gross tons. Whilst only United States ships can be employed in the United States coastwise trade, there is no reason, so far as the Committee is aware, why other vessels should not be chartered for and employed in the United States nearby and overseas foreign trades, thus releasing the United States tankers engaged in those trades for the carriage of oil to Italy.

Further, in this connection, it has to be borne in mind that, in so far as the United States might be able to arrange for the supply of oil to ports in the northern Atlantic range from ports in the Gulf in lieu of from ports in California, an additional amount of tonnage would be made available for possible use in foreign trade because of the much shorter voyage involved.

The Committee has also examined the question whether non-member States would, in the event of any of their tonnage being diverted to Italian trade, be able to replace such tonnage by tankers chartered from Member States. During recent months, there has been a fair number of tankers belonging to Member States engaged in the carriage of oil to Italy, which, in the event of an embargo, would become available for this purpose. Secondly, there are, at the present time, no less than 340,000 gross tons of tankers laid up. It is thought that, if necessary, at least one-half of this tonnage could be put into commission. Thirdly, according to Lloyd's Register shipbuilding returns for December 1935, there is 435,560 gross tons of tanker tonnage under construction, and the greater part of this tonnage will, it is reported, become available for service during the year. There seems little doubt, therefore, that any tonnage belonging to non-member States which may be diverted to Italian trade can be replaced.

From the foregoing, it appears clear that, in the event of an embargo on the use of tankers belonging to Member States, arrangements could be made by Italy and non-member States for a very considerable block of tonnage belonging to non-member States to be made available for the carriage of oil to Italy, although there can be no doubt that the carriage of Italy's supplies of oil in such circumstances would be more difficult to arrange and would be made more expensive, owing to the fact that Italy would be precluded from chartering in the open freight market and could only obtain such tonnage as was required from the restricted market offered by such States as were not applying the embargo.
III. FORMS OF EMBARGO.

As regards the form of any possible embargo on the use of tankers for the carriage of oil to Italy, the embargo, if it is to be fully effective, would have to be such as to prevent tankers of Member States from being used (whether by Italians or by anyone else) for the carriage of oil to Italy. For the sake of completeness, the prohibitions should perhaps cover discharges to Italian ships, but the possibility of oil being transferred at sea from a tanker belonging to a Member State to a tanker in Italy’s service need probably not be regarded as serious in practice.

It would clearly be necessary to prohibit, in the first place, the direct sale to Italy of tankers belonging to Member States, and early simultaneous action by all Member States would be required. It would, however, be necessary also to prevent indirect sales to Italy, and to this end all sales of tankers to States not actually applying the embargo would have to be prevented.

The Committee has considered the question of an embargo on the chartering of tankers. A prohibition of time chartering of tankers to Italy would not by itself prevent the tankers being used for the carriage of oil to Italy. If the embargo was one against chartering, then it would be necessary for Member States to prohibit time chartering of tankers to States not applying the embargo, and to prohibit voyage chartering of ships for the carriage of oil to Italy, and also to prohibit the use for the carriage of oil to Italy of any tankers that might be time chartered by their nationals from other Member States. A prohibition of all time chartering of tankers to non-member States would, however, mean a very serious interference with tanker trades not in any way connected with Italy. Further, considerable difficulty must arise in dealing with ships chartered by a Member State applying the embargo to a national of another such State where that national resides outside the jurisdiction of the latter State.

Another form of embargo might be either a prohibition against (a) the discharge in Italy of oil from tankers belonging to Member States or (b) the proceeding of such tankers to Italian ports. The latter would appear to be the more practicable, in view of the difficulties which would arise if it were necessary, in cases of offences, to prove the actual unloading of oil in Italy.

The Committee is of the opinion that, if an embargo on the use of tankers belonging to Member States for the carriage of oil to Italy is to be enforced, the most practicable form of embargo would be one which combined:

(i) A prohibition against the sale of such tankers to States not applying the embargo; and
(ii) A prohibition against the proceeding of such tankers to Italy.

A prohibition on the proceeding of tankers belonging to Member States to Italy might raise difficulties in the case of vessels chartered on voyage charters for the carriage of oil to Italy. Such a prohibition would, of course, apply to vessels already on time charter and might, perhaps, raise difficulties for the owners of ships so chartered, which can, under the contracts already made, be used for worldwide trade. The extent of these difficulties cannot, however, be estimated in the absence of detailed information of these contracts.

It would be necessary for the States enforcing the embargo to take measures to watch the movements of all their tanker vessels, and also to take steps, in cases of offences, to collect the evidence required to secure convictions with the possible application of heavy penalties on the owner and/or master.

IV. CASED OIL.

The Committee has further considered the question of the prohibition of the carriage to Italy of cased oil in ships belonging to Member States, and has come to the conclusion that it would be impracticable to prohibit such carriage, having regard to the difficulties attached to the administration of any such prohibition.

V. INLAND TRANSPORT.

Finally, as regards the possible transportation of oil to Italy from neighbouring countries by rail or inland waterways, the Committee is of opinion that this would only arise as part of an attempt to secure supplies through States not applying the embargo. While certain possibilities exist which might be used, the Committee is of opinion that, if any State or States were giving facilities to Italian trade in this matter, the oil would be more likely to be carried by sea, since it would be much cheaper and much more practicable, particularly if considerable quantities were involved.
Sub-Appendix I.

IMPORTS OF PETROLEUM INTO ITALY, 1931-1934

AS RECORDED: (i) IN THE ITALIAN IMPORT STATISTICS; (ii) IN THE EXPORT STATISTICS OF THE EXPORTING COUNTRIES.

Source: Official Trade Statistics.

Note. — The percentages are calculated thus: for each kind, on the total of its kind (e.g., "crude" on the total crude); for the total of each country on the grand total (last line).

(In metric tons (ooo's omitted.).)

<table>
<thead>
<tr>
<th>Country and kind</th>
<th>(i) Italian import statistics</th>
<th>(ii) Corresponding export statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average 1931-1934</td>
<td>Average 1932-1934</td>
</tr>
<tr>
<td></td>
<td>Weight</td>
<td>%</td>
</tr>
<tr>
<td>France: Crude</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Petrol</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Kerosene</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Residual (Fuel Oil, etc.)</td>
<td>18.1 1.9</td>
<td>24.1 2.4</td>
</tr>
<tr>
<td>Lubricating</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Total</td>
<td>18.1 1.1</td>
<td>24.1 1.4</td>
</tr>
</tbody>
</table>

| Roumania: Crude | 23.5 10.3 | 30.0 22.2 | 47.9 33.5 | 30.3 23.1 | 40.4 25.1 | 54.2 24.4 |
| Petrol          | 31.0 9.3  | 36.0 11.2 | 56.9 16.3 | 82.1 22.7 | 84.1 24.3 | 84.9 21.5 |
| Kerosene        | 64.8 45.2 | 66.4 46.8 | 58.6 40.5 | 109.9 55.0 | 106.2 54.9 | 92.5 49.8 |
| Residual (Fuel Oil, etc.) | 385.0 40.1 | 417.0 41.3 | 465.9 41.5 | 596.8 33.8 | 639.8 35.1 | 736.1 37.0 |
| Lubricating     | 5.5 8.1  | 5.9 7.5  | 3.7 5.6  | 10.1 11.2 | 9.5 10.0 | 5.8 4.2  |
| Total           | 599.8 31.2 | 554.4 33.1 | 633.0 34.7 | 829.2 32.5 | 880.0 33.6 | 973.5 33.2 |

U.S.S.R.: Crude | 38.5 30.1 | 34.1 25.2 | 7.3 5.1  | 12.1 9.2  | 16.2 10.1 | 6.4 2.9  |
| Petrol         | 78.6 23.6 | 79.2 24.7 | 91.3 26.3 | 115.5 31.9 | 107.4 31.1 | 114.8 29.0 |
| Kerosene       | 46.2 32.2 | 42.5 30.0 | 39.4 27.2 | 50.8 25.4 | 49.9 25.8 | 42.9 23.1 |
| Residual (Fuel Oil, etc.) | 318.3 33.1 | 317.2 31.4 | 258.7 23.1 | 732.9 41.4 | 719.3 39.5 | 631.3 31.7 |
| Lubricating    | 7.2 10.6 | 6.9 10.4 | 6.4 9.8  | 16.5 18.3 | 15.1 15.8 | 19.0 13.8 |
| Total          | 488.8 29.9 | 479.9 28.6 | 403.1 22.1 | 927.8 36.3 | 906.9 34.8 | 814.4 27.8 |

Netherlands East Indies: Crude | — | — | — | — | — | — |
| Petrol         | 48.1 14.4 | 51.8 16.1 | 32.8 9.4  | 4.7 1.3  | 3.3 1.0  | 9.9 2.5  |
| Kerosene       | — | — | — | — | — | — |
| Residual (Fuel Oil, etc.) | 1.0 0.1 | 1.3 0.1 | 2.4 0.2  | 5.6 0.3 | 5.6 0.3  | 7.7 0.4  |
| Lubricating    | — | — | — | — | — | — |
| Total          | 49.1 3.0 | 53.1 3.2 | 35.2 1.9 | 10.3 0.4 | 8.9 0.3 | 17.6 0.6 |

Iran: Crude | 114.8 34.5 | 106.4 33.1 | 117.3 33.7 | 98.1 27.1 | 108.6 31.4 | 136.7 34.6 |
| Petrol        | 18.4 12.8 | 19.1 13.4 | 16.4 11.3 | 22.3 11.2 | 18.0 9.3  | 21.1 11.4 |
| Kerosene      | 65.1 6.8  | 65.1 6.4  | 86.9 7.7  | 99.2 5.6  | 114.2 6.3 | 144.1 7.2  |
| Residual (Fuel Oil, etc.) | — | — | — | — | — | — |
| Lubricating   | — | — | — | — | — | — |
| Total         | 198.3 12.2 | 190.6 11.4 | 220.6 12.1 | 219.6 8.6 | 240.8 9.2 | 301.9 10.3 |