FUTURE STRATEGY.

Appreciation by the Chiefs of Staff Committee.

This appreciation has been prepared with the object of examining, in the existing situation, the factors affecting our ability to defeat Germany, and to make recommendations from the military point of view as to the policy which should govern our war effort and the future conduct of the war.

2. The full text of our appreciation is attached. We summarise below our more important conclusions.

Object.

3. Although Italy is our declared enemy and other nations, such as Spain, may come under German control and become involved in hostilities against us, Germany is the mainspring of enemy effort. Whatever action it may be necessary to take against any other country must therefore be related to our main object which is the defeat of Germany.

The Economic Situation in German-Europe.†

4. It is of vital importance that supplies of deficiency commodities reaching German-Europe from outside sources should be reduced to an absolute minimum, and that their distribution within the area controlled by Germany should be impeded to the greatest possible extent. The denial of these commodities must be largely the result of as rigid a general economic blockade as possible, to include the Middle East and Mediterranean areas, supplemented by the use of diplomacy in respect of Russia, and by direct attack. Generally, with the exception of oil, it may be said that Germany’s control of Europe has put into her hands so many sources of supplies essential to her industry, that these no longer provide targets that it would be profitable to attack. Her capacity to carry on military

† Set out in detail in Annex, paragraphs 18 to 50.
operations can now be more profitably reduced by the destruction and dislocation of oil supplies, communications, factories, power stations, military installations such as dockyards and the distributive organisation. The destruction of refineries for both oil and non-ferrous metal will enormously increase the strain on Germany's transportation system.

5. The following main deductions may be made from a survey of the economic situation in German Europe:

(i) Oil.

Disregarding the effect of any action we may take to curtail them, Germany's oil resources from her present source of supply and existing stocks are sufficient to meet her minimal requirements and those of the territories under her control till about June 1941. After this date, however, her shortage of oil will become so serious that it seems inevitable that she must before then attempt to end the war or at least make some move to improve her oil position. Apart from ending the war by the defeat of Great Britain, Germany can only improve her oil position to any material extent by driving our fleet from the Eastern Mediterranean, thus ensuring seaborne supplies from Roumania and Russia. The capture of Alexandria would deprive the fleet of its base and so secure the desired result. From this we conclude:

(a) That a combined German and Italian attack on Egypt during the next six months is likely.

(b) That in the Spring of 1941 Germany will still be able to meet her estimated minimum requirements, though the situation will rapidly be approaching danger point.

(c) That after mid-summer the position in Germany will become precarious, even if she has succeeded in obtaining all possible seaborne supplies from Roumania and Russia (see Annex, paragraph 34).

(d) That, by the end of 1941, Germany's oil position may well become disastrous; and therefore

(e) That any steps we can take to deprive Germany of oil will be of the utmost importance in hastening her defeat.

(ii) Food.

The shortage of food supplies will create a difficult problem for Germany, not only in sustaining morale within Germany itself but also in holding down hungry populations in occupied countries. The dislocation of distribution arrangements and hoarding by agricultural populations will increase Germany's difficulties, particularly in industrial areas.

(iii) Distribution and Transport.

Shortages of essential commodities, particularly oil and food, lend added importance to an efficient distributive system. Dislocation, even for short periods, of an improvised system, deprived of sea transport, may have great effect. The communication system of Germany and German-controlled Europe will therefore remain a very important objective for air and other action.

(iv) Industry.

European industry is largely dependent on the extent of Germany's armament requirements. Reduction in these requirements and shortage of oil may lead to an increasing employment problem which would be intensified by attack on industrial targets.

(v) Time Factor.

Time is on our side, provided we can continue to draw on the resources of the world and build up our armaments with the minimum of interference,
whilst continuing to subject the enemy to the utmost rigours of blockade. Unless Germany can materially improve her position, particularly with regard to oil supplies, we believe that her economic condition will be at a low ebb by the spring of 1941. Subsequently the rate at which her economic condition will deteriorate may be temporarily slowed up due to the opening of Danubian traffic and this traffic may prove a valuable target for attack when bombers with longer range are in service. Nevertheless, by the summer of 1941 German-controlled stocks of oil should be expended and the deterioration of her economic condition will continue.

Ability of Certain Countries to rise against the Nazi Regime.*

6. It is clear that none of the countries at present under enemy domination, with the possible exception of Poland and Czechoslovakia, is likely from its own resources to be in a position to initiate risings on any considerable scale. Such risings are only likely to be brought about as an outcome of careful plans and detailed organisations controlled and assisted from this country.

Comparison of Armed Forces.

7. Our study of the comparative strengths of our own and the enemy forces shows that at sea our superiority over the German and Italian navies should be maintained up to August 1942. The active hostility of the French naval units would add very considerably to our naval commitments, but should not dangerously weaken our control. The morale of the Italian navy is uncertain and might deteriorate rapidly if we could engage it successfully. If Italy should be defeated we should have an overwhelming position vis-à-vis Germany at sea.

8. The German army, supported by a very large air force, is of a strength which precludes the possibility of the relatively small field force that we should have available in 1941 being able to strike successfully against Germany herself. By 1942, however, the effects of the blockade and air attack and the commitments in occupied areas may have considerably reduced the mobility and efficiency of both the German land and air forces. Moreover, by the summer of 1941 our air striking power should have substantially increased and in 1942 should be immensely formidable.

9. Whilst Italy enjoys a superiority of land and air forces in the Mediterranean and Middle East in the present period, shortages in armament and equipment are likely to prevent any large expansion of her forces. If we can reinforce our garrisons in the Middle East, Italian action alone is unlikely to achieve a major success. In any event the morale of the Italian population and fighting forces is not likely to remain good. In East Africa the Italian forces are a wasting asset and although they may have temporary successes their situation will be critical after June 1941 even if they exercise strict economy in the expenditure of their limited resources.

Factors affecting the achievement of service programmes and their expansion.

10. In paragraphs 82–92 we set out the present programmes for the three fighting services and merchant shipping. With the object of assessing whether the programmes that we would desire on military grounds are, in fact, at all within the bounds of possibility, we have sought the advice of representatives of a number of services and supply departments, including the Ministry of Aircraft Production, Ministry of Supply and the Survey of Economic and Financial Plans. The subject, however, covers so vast a field, and includes so many technical factors on which we are not qualified to give an opinion, that we cannot do more than draw attention (Annex, paragraphs 93–113) to some of the more

* Set out in detail in Annex, paragraphs 51 to 57.
† Set out in detail in Annex, paragraphs 58 to 62.
important aspects. We are advised that the main factors that may limit our productive ability to build up our forces are labour, the supply of raw materials and specialised machine tools, forgings and pressings. The effect on industry of air attack, and the effect on our supplies resulting from attack on shipping and ports may make great differences to our productive capacity. Sudden changes in production plans are liable to upset badly the smooth running of all the programmes. Such changes should therefore be avoided if possible or introduced only after careful planning. In general, the existing programmes appear to be a reasonable target figure for industry. But whether or not they can be achieved depends upon—

(a) The extent to which our industry and imports are interrupted by air and sea attack.
(b) The extent to which the United States productive capacity is placed at our disposal.
(c) No violent change being made either in the programmes or in their priorities.
(d) The extension of the age group to 18-50 if there is to be any large increase in the numbers of A.A. troops.

In view of the magnitude of this problem, we suggest that a most detailed and careful examination should at once be set on foot with a view to determining whether, to what extent, and when the required programme can in fact be met.

Courses of Action open to the Enemy.

11. It appears certain from the time factor that Germany and Italy will be driven to further action in the near future. In our appreciation we have assumed that any enemy attempt to invade this country will fail, and on this assumption the courses which appear to offer the enemy the best probability of success and the greatest economic advantages are:

(a) Naval and air attack on shipping and ports with a view to cutting off supplies, combined with air attack on industry and morale, and an intensification of the propaganda campaign.

Combined with—

(b) An attack on Egypt from Libya with a view to driving the British fleet from the Eastern Mediterranean, obtaining the cotton of Egypt, ensuring tranquil trade for the transport of oil from the Black Sea and eventually relieving Abyssinia;

and/or

(c) An attack south-westwards with a view to obtaining control of the Western Mediterranean, improving their position for attacking our trade and weakening the blockade, and ultimately creating a threat to our interests in West Africa.

12. At the same time, Germany will not lose sight of the possibility of invading the United Kingdom and will complete all preparations so as to be able to strike when she considers conditions are suitable. We make no attempt to assess the effect on Germany of an abortive attempt to invade this country.

13. It appears unlikely that Germany will advance south-eastwards through the Balkans in the immediate future, but Italy may move into Greece.

14. Whatever course Germany and Italy may adopt they will make use of every political subversive and Fifth Column stratagem.

The Strategy we should adopt in order to defeat Germany.*

15. Although in two important respects, namely, in economic pressure and in the air, we are already engaged in a relentless offensive, we are still in the phase, in certain theatres and in certain spheres, when our strategy must be

* Set out in detail in Annex, Part III, paragraphs 134 to 219
primarily defensive and our energies devoted to building up our strength. The security of the United Kingdom remains our primary consideration.

The security of our position in the Middle East is of the utmost importance to our strategy, not only as a base from which to exercise and intensify economic pressure, but as a barrier to prevent our enemies from breaking the blockade. The reinforcement of the Middle East is thus clearly a matter of the greatest urgency, particularly in view of the long sea passage involved for reinforcements and equipment coming from the United Kingdom.

There are other important areas which are threatened. Malaya is by no means secure and reinforcements must be provided as early as possible. The security of West Africa, in particular of Freetown, is essential to the control of our sea communications and reinforcements for this area are also required. In addition Iraq and Palestine are subject to a long-term threat and reserves must be made available as soon as circumstances permit.

The necessity for making provision for our security overseas thus postpones the time when we can hope to undertake major offensive operations.

16. The wearing down of Germany by ever-increasing force of economic pressure should be the foundation of our strategy. Simultaneously, we must extend our air attacks on Germany, and these attacks must be directed mainly on targets that will assist our economic pressure, such as oil supplies, communications and industry. While we continue to build up our resources, it will be important that we should develop as quickly as possible the scale of these attacks, and within the limits of our resources, undertake amphibious operations against the enemy's coastline to harass him and lower his morale.

17. As our forces expand, our policy must be directed to making full use of sea power to enable us to strike with land forces at outlying enemy positions. Such attacks, though limited in extent, should stretch out the enemy defences, use up his resources, tax his communications and put in our hands positions from which we can tighten our blockade and areas in which we can raise revolt against enemy occupation, or support neutrals in their action to deny their resources to the enemy. With the further expansion of our forces and the weakening of those of the enemies, operations with these objects can be conducted on a larger scale and should also be directed to detaching from Germany those countries that she now occupies.

18. The elimination of Italy and the consequent removal of the threat to our control of the Eastern Mediterranean would be a strategic success of the first importance. Italy's power of resistance is much less than that of Germany and direct attack on Italy and her possessions in Africa may be the first important step we can take towards the downfall of Germany. It will therefore be of great importance to turn to the offensive against Italy as soon as our resources permit.

19. It is not our policy to attempt to raise, and land on the Continent, an army comparable in size with that of Germany. We should aim, nevertheless, as soon as the action of the blockade and air offensive have secured conditions when numerically inferior forces can be employed with good chance of success, to re-establish a striking force on the Continent with which we can enter Germany and impose our terms.

Timing of our ultimate offensive.

20. One most important conclusion emerges from the considerations set out in this appreciation. The severe effects of another winter of blockade on the internal economy and morale of Germany and her conquered territories, the cumulative effect of air attacks, and possibly disastrous failure of attacks on this country, may take a heavy toll of the German will to continue the struggle. Nevertheless, we cannot rely on an internal breakdown from these causes in 1941, though we should do all we can to hasten it by intensifying such offensive and harassing action as can be taken with the forces at our disposal.

We cannot count on Germany's precarious oil position doing more than seriously restricting her strategical flexibility by the end of 1941. This would not prevent Germany from maintaining her greatly superior numerical strength in land and air forces and, although we may hope to bring about the defeat of Italy if circumstances are favourable to us, we see no prospect of undertaking land operations on a major scale against the German army next year.
21. Our programme of air expansion cannot come to fruition until 1942, and, in order to achieve the strength at which we aim, our first-line expansion during 1941 must be limited. If we try to expand too quickly in the next 12 months, we cannot hope, at the same time, to build up our air power to a decisive strength in 1942. The same considerations apply to a lesser extent to the Army, whose programme cannot be expected to be complete until 1942.

At the same time, we must bear in mind that in the absence of decisive successes against the German and Italian fleets in the intervening period, our relative naval position will deteriorate in 1943 and our Merchant Shipping position may become increasingly serious. If, therefore, we attempt, without success, to achieve a decision in 1941, we shall have mortgaged our capacity to build up forces of decisive strength by 1942, and may well be unable to gain a decision before our position at sea undergoes a serious deterioration.

22. It is, however, quite impossible to forecast with certainty the rate of decline of German strength and morale; many economic and political factors, at present hidden from us, may affect events. It must obviously be greatly to our advantage to achieve victory as early as possible; we must therefore always be ready to take advantage of a favourable situation, and to seize really profitable opportunities as they arise while avoiding commitments beyond our strength in the unjustified expectation of a short cut to victory.

23. The general conclusion, therefore, is that our strategy during 1941 must be one of attrition. We must secure our possessions in overseas theatres of war and retrieve any that may have been lost owing to our temporary weakness. We must intensify the economic blockade, sustain the air offensive and generally wear down the enemy's resistance with the aid of minor amphibious operations and other activities described in the foregoing paragraphs. During the period in which we are building up our resources circumstances may change in such a manner as to justify our diverting forces from action against Germany in order to eliminate Italy. If this should be possible, we should undertake decisive action against Italy beginning by air action against Italy herself and invasion of her African Colonies. Throughout 1941 we must accelerate to the utmost the building up of our resources. But the general aim which should govern our strategy and determine the scope and rate of development of our expansion programmes should be to pass to the general offensive in all spheres and in all theatres with the utmost possible strength in the Spring of 1942.

24. The entry of America into the war on our side would have a profound effect. We should be justified in taking greater risks and accepting heavier losses in seizing any favourable opportunities that may arise for offensive action in 1941. Nevertheless, we do not consider that it would be safe to assume that the accretion to Allied strength on land and in the air by the Spring of 1942 would be such as to justify us endeavouring to accelerate our own expansion in 1941 at the serious expense of our strength in 1942.

Requirements of the Fighting Services.

25. We have set out* the strength of the forces which we estimate we shall require in order to implement the strategy outlined above. We have attempted to set out a balanced programme in which our strategic requirements are related to the man-power and productive capacity which is likely to be at our disposal, in so far as we have been able to assess them.

We summarise below the main conclusions in respect of each of the three Services.

* Annex, Part IV, paragraphs 220 to 271.
Naval Requirements.

26. The original balance in our Naval programme between types of ships should be restored. Immediate bias has been given towards light craft, to meet the danger of invasion and for anti-submarine protection to trade, but we cannot afford to go too far in this direction.

It is most desirable to resume the suspended naval construction programme as soon as possible, and in view of the changed character of the war, naval construction should as far as possible take priority over other requirements, except those of the Air Ministry and Mercantile Shipbuilding.

The effects on our present naval programme and on those of other services of a resumption of this suspended naval construction programme clearly requires detailed examination before a decision can be made.

Merchant Shipping.

27. The construction of Merchant shipping must be related to the programmes of the three Services, and must be given the priority needed for maintaining our essential imports.

Army Requirements.

28. Of the 55 Divisions which should be available from the Empire in the Spring of 1942, the equivalent of 21 may be required for the security of our overseas possessions (other than the Dominions and India and apart from internal security troops). This leaves 34 Divisions available for the requirements both of the home field force and for offensive operations overseas. The strength of the home field force will vary in accordance with the imminence of the threat of invasion, but it appears probable that a force of the order of from 20 to 30 Divisions will be available for offensive operations overseas by the Spring of 1942. It is possible that the existing equipment programme will permit of some further expansion after the Spring of 1942, but this cannot at present be defined, and by that time we may see distinct advantages in supplying equipment on an appreciable scale to potential allies.

29. The present programme contemplates the provision of 5 armoured divisions and 10 Army tank Brigades. The latter represent roughly the equivalent of 3 armoured divisions in numbers of tanks, but these are of a slower type and are not satisfactory substitutes—especially in the Middle East. From the operational point of view, we are not satisfied that the proportion of the "cruiser" type of tank is sufficiently high. We are advised that any considerable increase in the tank programme could not be achieved without interference with the programmes of the other Services. While this point should be further explored, an immediate step should be to investigate the possibility of increasing the output of "cruiser" tanks in relation to that of "I" tanks.

Air Force Programme.

30. The following table summarises the suggested target programme for the Air Forces of the Empire. This programme is based on the production programme in the United Kingdom, supplemented to a considerable extent by the productive potential of the United States. It comprises a number of requirements that have already been assessed in previous appreciations, such as those for overseas commands and for trade protection, in addition to a heavy bomber force of devastating, though not necessarily final strength, including a high proportion of the new types of heavy bomber now just beginning to come into service.

31. Provided the necessary quota of trainer aircraft can be made available, this programme, which is based on aircraft production, can reasonably be expected to be maintained with trained personnel and completed within a reasonable period of time, not less than two years, subject of course to certain factors which cannot be forecast in any programme, such as the intensity of operations in the intervening period and the extent of interruption of home production by enemy action.
### Target Programme of First-Line Squadrons

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* Includes a high proportion of types suitable for day operations and the support of the Army.

(Signed) DUDLEY POUND. 
J. G. DILL. 
R. E. C. PEIRSE, V.C.A.S.

**Note.**—The Chiefs of Staff have not had the opportunity of seeing this report in its final form. They have, however, authorised their signatures to be affixed while reserving the right to make minor subsequent amendment.

*Richmond Terrace, S.W. 1, 
September 4, 1940.*
ANNEX.

FUTURE STRATEGY.

APPRECIATION.

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PART I.—Review of the main factors affecting the situation.
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PART III.—Examination of our strategy for the defeat of Germany.
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Part I.—Review of the Main Factors affecting the Situation.

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WAR CABINET.

Chiefs of Staff Committee.

FUTURE STRATEGY.

Appreciation.

THE purpose of this appreciation is to examine, in the light of the situation created by the collapse of France, the factors affecting our ability to defeat Germany, and to make recommendations from the Military point of view as to the policy which should govern our war effort and the future conduct of the war.

2. Although a major enemy assault on the United Kingdom must be our primary preoccupation at the present time, it is clearly essential to look beyond this threat. We have confined this appreciation to the assumption that any enemy attempt to invade this country will fail, and have not considered the problems that would arise in the event of our having to continue to carry on the war from Canada.

Object.

3. Although Italy is our declared enemy and other nations, such as Spain, may come under German control and become involved in hostilities against us, Germany is the mainspring of enemy effort. Whatever action it may be necessary to take against any other country must, therefore, be related to our main object which is the defeat of Germany.

PART I.—REVIEW OF THE MAIN FACTORS AFFECTING THE SITUATION.

Political Factors.

4. To all intents and purposes Germany now dominates the whole continent of Europe, excluding Russia, the Baltic States and Turkey. Whatever their sympathies, none of the smaller remaining neutrals would dare to oppose Germany openly so long as her military power remains at its present level. We examine the political situation in individual countries below.

Spain and Portugal.

5. As our oldest ally, Portugal is well disposed towards us. At the same time, in the absence of any direct support from ourselves, her attitude is likely to be conditioned by events in Spain.

6. The situation in Spain is satisfactory at present, but might change under enemy pressure or with a change of Government. It is unlikely that the present Spanish Government will intervene against us willingly; on the other hand, our enemies are in a position to bring strong pressure to bear against Spain, if necessary by invasion from France. We cannot, therefore, count on continued Spanish non-belligerency; or, if Spain intervenes, on Portuguese ability to maintain neutrality.

The Balkan States (excluding Turkey).

7. In the Balkans our prestige is low and all confidence in our ability to afford support against German, Russian or Italian aggression has, for the present, vanished. The Balkans are almost completely under German influence, in some cases owing to the immediate fear of German invasion, in others through the realisation that only Germany can save them from Russia. Germany might, however, be deterred from military action in the Balkans by the possibility of complications with Russia or Italy, and by the risk that military operations in this area would upset an important part of her economic system. Nothing we can do at the moment is likely to affect the attitude of any Balkan State towards Germany. Nevertheless, it is possible that we may be able to exploit the latent internecine rivalries among the Balkan countries to our own advantage (see paragraph 204).
The Middle East.

8. British prestige in the Middle East, as in the Balkans, has suffered a great set-back as a result of Germany’s unbroken series of successes and military achievements, although this has to some extent been offset by the firm attitude we have taken in the face of reverses and of the defection of our Ally. Italian successes in Somaliland and at Kassala, as well as the lack of any signal British success on land, must also have contributed to the lowering of our prestige. The future course of events in the Middle East is, however, likely to be influenced mainly by military events in the Mediterranean and at home, by the attitude of Turkey, and, of course, by any German action in the Middle East itself. Any further serious set-backs at home or reverses in the Mediterranean or Middle East area would probably lead to serious internal security problems in Egypt, Palestine and Iraq, and the results in these countries if Turkey were to swing over towards our enemies might well be calamitous. The internal situation in Egypt may also deteriorate in the event of an open clash between ourselves and the Palace; and difficulties may arise in Syria in the event of a breakdown of the French administration.

Turkey.

9. Turkey is at present a friendly neutral, but in spite of our Treaty of Alliance there is little hope of her intervening on our side in present circumstances. The greatest danger is that she might, in the event of a deterioration in her relations with Russia, be driven, in the absence of effective British support, to reunite herself with Germany at our expense.

Russia.

10. Neither we nor the Germans trust the Soviet, but neither side wish to quarrel with her openly at present. Russia, on her part, is evidently anxious to avoid hostilities with a Great Power. While the British Empire is the main barrier to the realisation of possible Soviet dreams of world-wide revolution, Germany, if victorious, would be a dangerous neighbour in the economic and territorial field; consequently, the Soviet Government hopes at best to see both sides exhausted in the struggle, and in the meantime to make such adjustments as opportunity offers to improve her strategic position and raise her prestige by regaining the frontiers of Imperial Russia. She has already occupied parts of Finland, Poland and Roumania, and has insured herself against Germany by occupying the Baltic States. She will probably also press Turkey to modify the Straits Convention in her favour.

11. The collapse of France may have an important influence on future Russian policy. Russia may now feel that she must be prepared for an early and complete German victory, which would allow Germany to establish herself in the Middle East and thus threaten by air attack the Caucasian oil fields. Russia may also think it necessary to insure herself against similar action on our part if we win the war. Her policy may therefore be directed to keeping both Germany and ourselves at arm’s length in this area. So far as Germany is concerned, Russia is unlikely to acquiesce in German domination of Turkey or control of the Straits. So far as we are concerned, Russia may well, if the war drags on, make moves to insure herself against us by expansion in Iraq and Iran. Whilst Stalin is not certain of a German victory, he will probably be reluctant to take a step—such as an attack on Iraq—which would bring him into direct conflict with ourselves. For the time being, it is more probable that he will concentrate on safer objectives, such as Finland or Northern Iran.

France.

12. In considering France, we must differentiate between France and her colonial possessions. In Metropolitan France, a large part of which is in German occupation, there can be no really independent national Government. The present Government is not likely to remain long in power, but whoever is ruling France, it is certain that Germany will really direct the policy. We must therefore anticipate that the foreign policy of France will be directed towards embarrassing us as much as possible. Even with the return of the Monarchy, which is now a possibility, the control of French policy will be firmly held by Germany. Furthermore, as time goes on and France feels the pinch of our blockade, a deeper
hatred of war and those who are prolonging it will be felt. Whether this hatred will be vented on ourselves or on Germany remains to be seen, but German-controlled propaganda will doubtless do its utmost to make the British Empire the target.

In spite of this, we are advised that it is unlikely that Germany will succeed in forcing France into active hostilities against us, particularly as there will always be elements that remain true to their old alliance and these may be expected to rally to our side as soon as the defeat of Germany seems probable.  

13. In the French colonial possessions the situation has not yet crystallized and it is not possible to foresee what the final situation will be. We can, however, draw a broad division between those colonies which from their strategic situation we cannot at present hope to control, and those over which—if necessary by pressure—we can expect to be able to exercise some form of control. In general, it seems unlikely that our earlier hopes of inducing the French colonies to continue to fight on our side spontaneously will be realised. They are more likely to follow the de facto Government, as it is upon the Government of France that the appointments, salaries and pensions of members of its colonial administration depend. It is, however, possible that certain colonies over which we can exert a measure of economic control may be induced to break with the French Government and actively ally themselves with us, possibly under General de Gaulle. Unless this happens, we cannot assume that the use of French bases will anywhere be denied to our enemies, except by the action of our own forces.

Japan.

14. Japan, like Russia, sees in the war an opportunity to pursue her Imperialist aims while the going is good. How far she means to go we do not know; the uncertain reactions of the United States and of Russia, her uncertainty of the extent to which we ourselves are prepared to make concessions and of our future attitude if we defeat Germany, and the continuing heavy drain of the China war are factors which may deter her from pressing her claims too far. The new Japanese Government is, however, likely to be increasingly pro-Axis; and the least we can assume is that Japan's attitude will continue to be menacing, and that her sympathies will be with our enemies.

The United States.

15. There is no doubt that the sympathies of the vast majority of the American people are with us, and that they would view a German victory with the very gravest concern. American opinion is, however, somewhat divided at present as to the scale of assistance which should be given to us. The predominant feeling is still to avoid actual intervention in the war, while doing everything possible short of this to hinder our enemies. To what extent we can count upon economic and financial support is still uncertain; on the one hand there is a genuine and wide-spread desire to do everything practicable to help us, although not necessarily gratis; on the other the fear that even with this help we may be defeated, and that America's own defences must have the first claim on all American resources. The full extent of American co-operation is likely to remain obscure until after the forthcoming Presidential election; all we can say at present is that it would be wrong to count upon the actual intervention of the United States at any stage, but that we are justified in expecting a large measure of financial and economic co-operation, provided America remains convinced of our ability to avoid defeat and to defeat Germany with such co-operation.

The South American States.

16. The South American States will probably follow the lead of the United States.

Eire.

17. In her present attitude Eire constitutes a serious liability. Although the Government of Eire would probably call instantly for our help in the event of a German attack on Eire territory, they would undoubtedly resist any attempt on our part to land forces in Eire in advance of a German attack.
The Economic Situation.

18. The following general survey of the economic situation has been prepared in co-operation with the Ministry of Economic Warfare and the Survey of Economic and Financial Plans.

The Economic War.

19. As long as we exercise the control of sea communications the economic struggle is one between Great Britain with her opportunities of drawing on the resources of the whole world outside Europe, and Germany with her opportunities of exploiting the resources of the European Continent. The relative economic strengths of the two combatants thus depend on two factors. Firstly on the relative economic resources of Europe and of the rest of the world, and secondly on the degree to which Germany and Great Britain respectively can succeed in developing and utilising these resources for their war purposes. The first of these factors is one that lends itself to fairly precise definition, and in most respects, though not in all, the advantage lies with Britain. The second depends on a variety of factors, such as the relative efficacy of sea and land communications, and the economic results to be derived from exploitation by force of conquered territories as opposed to those of ordinary commercial intercourse. These are considerations of a far more uncertain character.

Great Britain's Economic Situation.

Importation and Distribution.

20. Our ability to draw upon the vast resources of the outside world depends on a number of conditions. It is obviously essential to maintain our physical capacity to import and distribute. This depends on the course of the war at sea and in the air, on the rate of our mercantile shipping loss, and on the extent of damage done to our ports and communications. Further retrenchment in civilian consumption and modification of our dietary can be effected without any crippling limitation on our war effort, but not without some interference with it, and not without certain dangers affecting our relations with other countries.

Vital Areas.

21. There are certain areas which may be threatened either diplomatically or militarily by our enemies, and over which it is important in varying degrees for us to maintain effective control. Our supplies of oil, for instance, are drawn from a number of widely separated sources. While there is plenty of surplus oil in the world at present, and none of these sources can be said to be vital, they are largely complementary, and the loss of a major source, such as Iran, Venezuela or the Netherlands East or West Indies, might, without being decisive, have far-reaching effects on distribution. This would probably result in severe shortages in some parts of the Empire, coupled with general interference in the allocation of the various oils and petroleum products. Some of these effects might permanently harm our economic organisation, and the replacement of supplies from other sources might involve serious delays and be difficult to maintain. It is therefore important that the security of these producing areas should be assured.

22. Supplies from America to this country can be regarded as reasonably safe. The Netherlands East Indies and Iran are, however, more vulnerable. The latter is of particular importance as a source of naval oil of which we might require to draw as much as nine million tons annually. Apart from oil the Netherlands East Indies are, together with Malaya, a valuable source of rubber and tin. The maintenance of control of Central and Southern Africa is important in order to ensure adequate supplies of copper and other materials such as chrome and asbestos.

Finance.

23. There is the problem of finding the means to purchase the supplies that we need to obtain from other countries, and in particular from the
United States. Our reserves of gold and saleable foreign securities are limited, and at the present rate of expenditure are unlikely to last for more than another year. It is impossible for us to export on a scale nearly sufficient to defray our necessary purchases, and before very long it will be essential for us to obtain credits on a substantial scale from the United States. This represents in the long run an indispensable condition to the successful conduct of the war.

**Industrial Co-operation of the United States.**

24. Given our physical ability to import and distribute, and our ability to finance our purchases, there remains the question of whether adequate supplies of the commodities most essential to our war effort will be available for us to buy. The United States are already beginning indirectly to place restrictions on their business community, hence on the consuming public, for the sake of increasing the contribution of her industry to our war effort, and they may well take further steps in this direction. It is of great importance to us to persuade the Americans to manufacture our own types, but we must be careful not to prejudice supply altogether by too great an insistence upon this.

**Disposal of Surpluses.**

25. Our economic relations with certain other countries raise problems of a different kind. The countries that specialise in producing agricultural commodities for export, including those of the South American Continent, the colonies of France, Belgium and Holland, and several of our own colonies, are suffering severely from surpluses as a result of the war, and will suffer still more seriously if we have to restrict further our purchases from them. Thus the difficulties of Germany in organising a balanced European economy when cut off from trade with the outside world have their counterpart in similar economic difficulties in many countries in the outside world when cut off from the European market. The resulting discontent, inflamed by Nazi propaganda, may prove a similar source of embarrassment and danger to us. It is a matter of the greatest urgency to complete and put into operation the schemes at present under consideration for the disposal of surpluses. Humanitarian appeals to feed hungry Europe will find fertile soil in these "surplus" countries.

**Germany’s Economic Situation.**

26. Prior to the collapse of France the economic problem that confronted Germany was to maintain minimum conditions of life for her civil population while equipping and replacing the wastage of a large army and air force. At the same time she had to seek, by air and sea attack, to prevent the full exploitation of the British and French Empires and the concentration in England and France of the equipment needed to defeat the German land, air and naval forces. With the collapse of France the situation has changed. The replacement of the wastage of large land forces is no longer a problem. Germany is favourably situated to attack the British Isles and our seaborne trade, but her basic economic problem is nevertheless no easier than it was, because she will have to administer the greater part of the Continent of Europe under the unfavourable conditions imposed by our blockade. Her economic position can now only be stated in general terms and is largely dependent on the degree to which she can exploit her conquests and impose her discipline upon them, extend her influence and obtain supplies from Russia. Germany’s chief problems are the deficiency in certain essential commodities of the area under her control, coupled with serious difficulties of distribution.

27. It is certain that Germany will need to maintain a reasonable level of industrial output both in Greater Germany and in the occupied and neutral territories, and that she must produce sufficient equipment and stocks to maintain a large air force, a navy with as many submarines and motor torpedo boats as possible and a large army.

**Essential Industrial Commodities.**

28. Germany will have in the area under her control sufficient supplies of iron-ore and steel capacity, bauxite and materials for aluminium, as well as zinc, lead, coal, timber and chemicals. She will also have a sufficient supply of labour, including skilled and specialised labour, and will suffer no pressing shortage of railway rolling stock nor of foreign exchange, though the latter, even when not blocked, is now of less value to her than hitherto.
29. Germany will, however, be increasingly short of copper, tin, ferro-alloys and special steels, of rubber, hides, skins and tanning materials, of cotton, wool and other material fibres and, above all, of petroleum products and lubricants. Though Germany may temporarily improve her position from captured stocks, the conquered territories were mostly themselves importers of these deficiency commodities. When these stocks have been used up the difficulties of the conquered territories will be added to Germany's own, and the disorganisation of German economy, together with that of the rest of Europe, may thereby be considerably accelerated.

Oil.

30. A full survey of Germany's oil position is contained in Paper No. P.O.G. (40) 48 of the 14th July, the salient features and implications of which may be summarised as follows: Oil is the weakest link in the economy of German-controlled Europe. It can be said that the annual minimum requirements of Germany and Italy for all purposes when engaged in war with the British Empire cannot be reduced below 8½ million tons, without restricting their war effort. The normal consumption of the rest of German-controlled Europe is 13 million tons, which might possibly be reduced to a minimum of some 6⅓ million tons by a process of the most drastic rationing, making a total estimated minimum requirement of 15 million tons.

31. Oil for German-controlled Europe is restricted to the following sources: Roumania, Russia, synthetic production and local natural sources. Of these, import from Roumania and Russia is severely restricted by difficulties of transportation. If the Mediterranean route from the Black Sea were open, and adequate tanker tonnage continued to be available, large additional quantities of oil could be imported from Roumania and Russia. Unless the Navy is forced to leave the Eastern Mediterranean this route is largely closed.

32. It is estimated that in present circumstances with the Mediterranean sea route largely closed Germany can expect to receive between June 1940 and May 1941 as follows:

<table>
<thead>
<tr>
<th>Source</th>
<th>Tons.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Roumania and Russia</td>
<td>2,600,000</td>
</tr>
<tr>
<td>(b) Synthetic</td>
<td>3,500,000</td>
</tr>
<tr>
<td>(c) Local sources</td>
<td>1,500,000</td>
</tr>
</tbody>
</table>

This makes a total of 7,600,000 tons annually, making no allowance for the damage we have already done, or may do in the future, to German oil plants and other stocks. If, by the Spring of 1941, the Germans succeed in developing the transportation system in South-Eastern Europe, the annual delivery of oil via the Danube and by rail might reach during the period April 1941 to April 1942 a total of 3 to 3⅓ million tons, and, in the later months of the period, might achieve a monthly rate of 300,000 tons. This would make a total of 8,500,000 tons annually, again without any allowance for the damage done to German oil plants by any action of ours.

33. The stock in Europe under German control is some 7,500,000 tons made up as follows:

<table>
<thead>
<tr>
<th>Country</th>
<th>Tons.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Germany</td>
<td>1,500,000</td>
</tr>
<tr>
<td>(b) Italy</td>
<td>2,750,000</td>
</tr>
<tr>
<td>(c) France</td>
<td>2,000,000</td>
</tr>
<tr>
<td>(d) Other countries</td>
<td>1,250,000</td>
</tr>
</tbody>
</table>

Of this total, at least 2,500,000 tons must remain in the distribution system. Thus, only some 5,000,000 tons can be available for major military or industrial purposes.

34. In present conditions, therefore, German-controlled Europe will have a visible maximum supply until August 1941 of under 13 million tons, against a minimum requirement of 15 million tons. By that time the present stocks will be used up and Germany would be limited to her annual receipts of 8,500,000 tons.
or little more than half the estimated minimum annual requirements of German-occupied Europe. The only way she could obtain significant additional quantities is by opening the Eastern Mediterranean. If she succeeded in doing this she could draw on 1,200,000 tons more from Roumania and possibly 2 million tons from Russia, if Russia chose to supply it, making a possible annual total, after August 1941, of 11,700,000 tons against the estimated minimum requirement of 15 million tons.

The tanker tonnage available is more than adequate to lift the suggested quantities of Roumanian and Russian oil.

35. Discounting the effects of air attack, which will probably be very considerable, the supply and stocks together are already inadequate for even nine months and Germany’s available oil is likely to be reduced to a dangerously low level considerably earlier as a result of uneven distribution. The removal of oil from conquered territories will have disastrous results on their administration and internal economy, and supplies in Northern Europe are already at a dangerously low level. This would naturally be accelerated by any destruction by air or sea attack. Even if she could restore tranquil trade in the Mediterranean the amount she could expect to get by August 1941 could scarcely meet her requirements.

36. It may be said that Germany’s position regarding special aero-engine fuels is more satisfactory than her general oil situation, but that that of lubricants is considerably less so and forms one of her greatest difficulties.

37. The difference between the rate of consumption in active and passive warfare, when considering total consumption, has been found to be surprisingly small. If she hopes to win the war, Germany must, for economic reasons, either undertake early operations to gain victory, or secure increased supplies of oil from Roumania and Russia. The latter will, of course, depend on Russia’s desire to help her, but Mediterranean sea routes are essential to obtain oil from both these countries. This would involve the elimination of our control of the Eastern Mediterranean which is dependent on the naval base at Alexandria. This port may, therefore, well be the one key to a vital German supply-line.

38. If Germany fails to secure this, and our estimates prove correct, she will, during 1941, be forced either to make such reductions in the oil stocks of conquered territories as to bring about the immediate disorganisation of their economic life, or else to demobilise a considerable part of her armed forces. While it would not perhaps be true to say that Germany will have lost the initiative, she will undoubtedly have lost some flexibility in her choice of plans by the early summer of 1941.

39. Germany’s oil situation is vulnerable to action on the following lines:—

(a) Naval action on the sea-routes through the Dardanelles and the Aegean.
(b) The destruction of hydrogenation and synthetic plants, refineries and stocks.
(c) Dislocation of communications from Roumania by the Danube and by rail, and from France and Italy by rail.
(d) Military action aimed at forcing Germany to disperse her stocks throughout the length and breadth of her occupied territories, thus decreasing the amount of freely usable oil and reducing her strategic mobility.
(e) Sabotage of oil fields now supplying Germany.

40. The textile situation is extremely serious and German-occupied Europe is almost entirely without sources of cotton and wool. Stocks of wool and supplies of hemp are about one half pre-war annual consumption, and stocks of cotton are only a fraction of this, while there are no supplies of coir and jute whatever. Germany must in no circumstances be allowed to obtain Egyptian and Sudanese cotton supplies, and it is of great importance that Turkish and Iranian sources of wool should be closed to her. Wool is the most serious of Germany’s immediate textile problems as supplies of it are essential to mix with her synthetic products for many essential purposes.
Industrial Metals and Other Materials.

41. The prediction of Germany's intentions regarding armaments is extremely difficult, but it is possible that she may now be content with a comparatively modest programme, except in aircraft and submarines. For this her present supplies of ferro-alloys, copper, &c., and even tin, may prove sufficient, though a more ambitious armament programme will become increasingly difficult without loss of quality and dislocation of other European industries. The same can be said of leather, rubber, textiles, and other commodities.

Food.

42. German difficulties are increased by the problem of food supplies, particularly of edible fats, meat, feeding stuffs and oils. These deficiencies cannot be made good by increased supplies of bulky foods, such as bread and potatoes, and it is more than doubtful whether these alternative foodstuffs will remain in supply at their normal level even if all reserves are consumed. The same holds good of sugar, fish, fruit, tea, coffee, spices, &c. Although there may be just sufficient supplies of essential foods in German Europe for a minimum ration for the whole population for which Germany has now become responsible, the task of distributing the supplies and of administering a uniform ration system will be difficult. With hostile and non-German populations it is likely to place so severe a strain on German resources that a widespread shortage of food throughout important European industrial areas during the coming winter can hardly be avoided. Moreover, this situation may be expected to deteriorate rather than improve next summer as the result of an indifferent harvest this year and the uneconomical destruction of live-stock.

43. The countries most immediately threatened with serious shortage, unless Germany contributes to their needs, are Poland, Belgium, Norway and France—probably in that order. There are already signs in Germany itself that the producers are holding back supplies to meet the needs of their families in case an acute shortage develops. If the European peasant population withhold even a small portion of this output this alone will cause very acute food shortages in some parts of the territories under German control, and it will probably also become necessary to reduce still further civilian rations in Germany itself. Non-co-operation can best be promoted by inculcating the fear that compliance with German demands may prove the greater of two evils.

Distribution.

44. The economic system of Greater Germany has produced spectacular results because it was based on an imposed discipline covering all activities down to individual transactions. This engendered a degree of compliance without which distribution would have proved impossible and Nazi economy would have spontaneously collapsed. Germany is now faced with the difficult problem of imposing her administrative system and economic discipline upon hostile populations, and particularly upon under-organised peasant communities.

45. The second great task confronting Germany is that of distribution in a Europe denied free use of the seas. The products of south-east Europe, North Africa and Italy are usually carried by sea into the mouth of the Rhine and to the great ports of North Germany, while German coal and other products go by the reverse route. The task of carrying these supplies by road, rail and canal may prove insuperable, especially in view of the shortage of fuel to which we have already referred. By denying Germany access to the oceans and to the coastal sea-routes of Europe, we must force her to attempt, within a limited time, the creation of a distribution system contained within the land-mass of Europe where resources are most inconveniently disposed, a task we may well hope to render impossible. The denial of Mediterranean sea-routes will have a profound effect on German economy during the coming winter, particularly on the transport of food, oil and fertilisers. Besides seriously reducing the mobility of Germany's armed forces the dislocation of the overloaded European distribution system, especially the main routes between the Balkans and Germany, would greatly accelerate the progressive deterioration of industry, and consequently demoralisation, produced by shortage of essential materials and other causes.
Italy.

46. The factors considered in these paragraphs have taken full account of Italy as a unit of German Europe. On her own resources Italy is in a position to carry on reasonably active land warfare only for a short period, provided that little expenditure of heavy armaments is entailed, and also to undertake naval and air operations in the Mediterranean for perhaps a year. Italy is not at present likely to make extensive calls on Germany for raw materials except for coal, which involves a heavy transportation problem, and will be able to contribute oil from her relatively considerable stocks, some of which have already found their way to Germany. Italian economy cannot, however, be dissociated from that of the rest of Europe and is governed by the same considerations; apart from oil, her contributions to the common cause will not be large.

Time Factor.

47. The time factor is most complex. Germany had a long start over the British Empire in war production and, consequently, she started the war vastly better prepared. Apart altogether from whether certain vital deficiencies may make it imperative for Germany to endeavour to finish the war quickly, it must be to her advantage to exploit her existing lead, which, when our war production gets into full swing in 1941, will be rapidly caught up. Her deficiencies in food, textiles, and oil, which may prove disastrous to her in 1941, point to the conclusion that her courses of action may well be restricted either to an early attempt to secure victory before supplies run out, and while she has the military lead, or else to turn to the East to obtain additional supplies of oil and natural fibres, without which she can neither hope to establish self-sufficiency in Europe nor undertake major operations after the summer of 1941.

Conclusions on German Europe.

48. It is of vital importance that supplies of deficiency commodities reaching German Europe from outside sources should be reduced to an absolute minimum, and that their distribution within the area controlled by Germany should be impeded to the greatest possible extent. The denial of these commodities must be largely the result of as rigid a general economic blockade as possible, to include the Middle East and Mediterranean areas, supplemented by the use of diplomacy in respect of Russia, and by direct attack. Generally, with the exception of oil, it may be said that Germany's control of Europe has rendered supplies essential to her industry less vulnerable to attack. Her capacity to carry on military operations can now be more profitably attacked by the destruction and dislocation of oil supplies, communications, factories, power stations and military installations such as dockyards. There are, of course, certain exceptions, but generally speaking, action should be directed in such a way as to throw the greatest possible strain on the distributive organisation. The destruction of refineries for both oil and non-ferrous metals will enormously increase the strain on Germany's transportation system.

49. Deficiencies of essential commodities are already sufficiently serious to make the successful exploitation or even maintenance of a Europe deprived of seaborne supplies very difficult. Their influence on European industry as a whole is naturally dependent on the extent of Germany's armament requirements, but it is reasonably certain that, by the middle of 1941, deficiencies, especially of oil, are likely to result in serious unemployment, critical shortages of producers' goods, and general economic disorganisation throughout Europe. If armament output is reduced, this will accentuate the employment problem. Although the date by which deficiencies and distribution difficulties may make it impossible for Germany to maintain large enough armed forces to stave off defeat cannot be predicted, the effect of the oil situation alone on her military freedom of action may soon be far reaching.

Deductions.

50. From this economic survey the following outstanding deductions may be made:—

(i) Oil.

Disregarding the effect of any action we may take to curtail them, Germany's oil resources, from her present sources of supply and
existing stocks, are sufficient to meet her minimum requirements and those of the territories under her control till about June 1941. After this date, however, when present disposable stocks should be exhausted, her shortage of oil will become so serious that it seems inevitable that she must, before then, have attempted to end the war or at least make some move to improve her oil position. Apart from ending the war by the defeat of Great Britain, Germany can only improve her oil position to any material extent by driving our fleet from the Eastern Mediterranean, thus ensuring seaborne supplies from Roumania and Russia. The capture of Alexandria would deprive the fleet of its base and so secure the desired result. From this we conclude:—

(a) That a combined German and Italian attack on Egypt during the next six months is likely.

(b) That in the Spring of 1941 Germany will still be able to meet her estimated minimum requirements though the situation will rapidly be approaching danger point.

(c) That after mid-summer the position will become precarious, even if Germany has succeeded in obtaining all possible seaborne supplies from Roumania and Russia.

(d) That by the end of 1941 Germany's oil position may well become disastrous; and therefore

(e) That any steps we can take to deprive Germany of oil will be of the utmost importance in hastening her defeat.

(ii) Food.

The shortage in food supplies will create a difficult problem for Germany, not only in sustaining morale within Germany itself, but also in holding down hungry populations in occupied countries. The dislocation of distribution arrangements and hoarding by agricultural populations will increase Germany's difficulties, particularly in industrial areas.

(iii) Distribution and Transport.

Shortages of essential commodities, particularly oil and food, lend added importance to an efficient distributive system. Dislocation, even for short periods, of an improvised system, deprived of sea transport, may have great effect, and shortage of stocks will probably prevent Germany making adequate preparations to meet such dislocation. The communication system of Germany and German-controlled Europe will therefore remain a very important objective for air and other action.

(iv) Industry.

European industry is largely dependent on the extent of Germany's armament requirements. Reduction in these requirements and shortage of oil may lead to an increasing employment problem which would be intensified by attack on industrial targets.

(v) Time Factor.

Time is on our side provided we can continue to draw on the resources of the world and build up our armaments with the minimum of interference, whilst continuing to subject the enemy to the utmost rigours of the blockade. Furthermore, Germany is faced with a grave shortage in oil in the near future and a serious food shortage, at least in German-occupied territories, will make itself felt during the coming winter. We therefore believe that Germany will be forced to act quickly to achieve victory before these shortages immobilise her armed forces. Unless Germany can materially improve her position, particularly with regard to oil supplies, we believe that her economic condition will be at a low ebb by the Spring of 1941. Subsequently the rate at which her economic condition will deteriorate may be temporarily slowed up due to the opening of Danubian traffic, and this traffic may prove a valuable target for attack when bombers with longer range are in service. Nevertheless, by the summer of 1941, German-controlled stocks of oil should be expended and the deterioration of her economic condition will continue.
Probable State of Readiness and Ability of Certain Countries to Rise against the Nazi Regime.

51. We have reviewed briefly in Appendix I the probable state of readiness of certain countries to revolt. Our main conclusions are as follows:

52. In Germany, in the absence of a serious military disaster, there is no likelihood of any serious risings against the Nazi regime by March 1941. The situation beyond that date is conjectural, and will depend on the extent that we are able to increase our air offensive and upon the effects of economic pressure. It is improbable that any large scale rising will occur from below, but internal security will become a growing commitment and disaffection within the army and the Party may arise.

53. The Polish and Czecho-Slovakian organisations are the most likely among the occupied peoples to rise against Germany. Although the Poles and Czechs are far advanced in comparison with other countries, any rising is doomed to failure unless accompanied by major and successful operations against Germany, or a general rising in other parts of Europe. Increasing difficulty is likely to be met with to prevent premature and spontaneous risings during the coming winter.

54. While in Italy there are indications of considerable anti-Fascist movements, which are likely to grow if the war is brought home to the mainland of Italy, the possibility of a rising is governed by the degree of control exerted by Mussolini’s Fascist police and militia, assisted probably by the Germans. The army may, however, be a deciding influence. Conditions in Italy, therefore, point to the importance of weakening the régime with all the means at our disposal. If we could subject objectives in Italy to air bombardment throughout the winter and continue this with successful operations against the Italian navy and overseas garrisons, an intensification of the blockade and propaganda, the necessary conditions might arise for the overthrow of the régime.

If we could increase our scale of attack against Italian East Africa the conditions are present for bringing about a large scale revolution against Italian control in this area. The Italian control could in any event be weakened if we could stimulate the existing state of unrest.

55. Norway shows a growing dissatisfaction with German rule, and would be prepared, at least in the west, to take part in disturbances if we could provide the necessary organisation and supplies. The Norwegian Government are anxious to make plans of this nature. It is not considered, however, that the Norwegians could overcome the German control sufficiently to carry out effective revolts by next Spring unless assisted from outside. The best that can be hoped for is some local co-operation with coastal raids and forays carried out from this country.

56. None of the other occupied countries at present shows any tendency to rise in revolt, although in Holland, for example, obstruction is beginning to grow. The effect of the enemy occupation through the coming winter will foster the subversive elements in these countries which can be turned to good account by appropriate propaganda. In France, particularly, and in Spain, exist the material for internal unrest on a scale which would severely tax an army of occupation.

Conclusion.

57. From the above we must assume that none of the countries, except possibly Poland and Czecho-Slovakia, is likely from its own resources to be in a position to initiate risings on an effective scale. Such risings are only likely to be brought about as the outcome of careful plans and detailed organisation controlled and assisted from this country.

Comparison of Armed Forces.

58. Germany and Italy have a very considerable preponderance of land and air forces, though the balance is in our favour at sea. We propose, therefore, to examine the enemies’ resources before our own, since the adequacy of our forces must be judged to a large extent against the background of the enemies’ military strength.
59. In considering the ability of our enemies to maintain and expand their armed forces there are certain factors the influence of which it is impossible to predict. These are, in particular, the effects of air attack on enemy morale, industry, shipyards, communications and resources, as well as the result of our blockade on the supply of raw material. Successful attack in these directions may have the widest repercussions which even the German High Command will not be in a position to assess in advance. The estimates of enemy military strengths and resources described below, except that in the case of submarines and aircraft allowance has been made for wastage at what is believed to be the present rate, are therefore based entirely on existing potential. No account has been taken of the limitations which may arise as a result of our air action or our blockade. The resulting figures are therefore highly speculative.

German Navy.

60. The composition of the German Navy on the 1st August, 1940, and an estimate of its strength in August 1941 and August 1942 is shown in detail in Appendix II.

<table>
<thead>
<tr>
<th></th>
<th>August 1, 1940</th>
<th>August 1941</th>
<th>August 1942</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Battleships</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Battle Cruisers</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Old Battleships</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Armoured Ships</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Aircraft Carriers</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>8-inch Cruisers</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>6-inch Cruisers</td>
<td>4</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Destroyers</td>
<td>0</td>
<td>18</td>
<td>23</td>
</tr>
<tr>
<td>Submarines</td>
<td>70</td>
<td>157</td>
<td>239</td>
</tr>
<tr>
<td>(allowing for wastage, 180)</td>
<td>(allowing for wastage, 225)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-boats</td>
<td>50</td>
<td>100</td>
<td>150</td>
</tr>
</tbody>
</table>

61. In the above estimates for 1941 and 1942 the number of submarines is largely conjectural, but the rate of production indicated approximates to the rate achieved during the second and third years of the last war, during which time German yards were engaged on a far heavier programme of surface craft.

62. Included in the numbers given are certain ships from the navies of occupied countries. French warships have not, however, been included, nor have French submarines now under construction at Havre and on the Seine.

German Land Forces.

63. Details of the German Army and its probable rate of expansion are given in Appendix III. In general terms, the German Army now comprises 188–189 infantry divisions, 10 armoured divisions and 7–8 motorised divisions.

64. Since the end of hostilities in France a number of divisions have been moved from the West to Poland and S.E. Germany. Such forces act as a reminder to Eastern and S.E. Europe of the power of the Reich, and are available for immediate military action if German interests in those areas appear to be threatened. It is also believed that a minimum of three motorised divisions are held available on the Franco-Spanish frontier. No definite information has been received of the move of German troops into Italy, but it seems that Germany is prepared to bolster up an Italian attack on Egypt or elsewhere with armoured and motorised divisions. German intentions cannot, therefore, be foreseen from the troop movements which have taken place since the cessation of fighting in France. Germany appears to have so disposed her forces that she can intervene rapidly with military force in East and S.E. Europe, Spain and Italy.
65. We may expect, in the near future, some degree of demobilisation in the German Army to free men for work on the land and to provide certain types of skilled men for industry. But, in view of the present state of Europe, such reductions are unlikely to be either drastic or permanent, and men will be liable to recall at short notice.

66. On reviewing the various factors of potential, including the assumption that the German Air Force is given priority over the other two services, and provided that there are no major operations in the interval, we consider that in 1942 the number of German divisions in existence will probably not have been increased, though some infantry divisions may have been converted into armoured or motorised divisions. After allowing for the policing of occupied territory and earmarking of troops for internal security duties within the Reich, Germany should be able to produce a force for offensive or defensive operations in 1942 of the following minimum size:

- 85 infantry divisions,
- 6-14 armoured divisions,
- 5-10 motorised divisions.

If, however, the attitude of Russia became more hostile, some 45 divisions might have to be withdrawn from this force to watch her.

67. The equipment and training of these divisions if existing conditions persist is likely to be first-class and morale should be reasonably good. Germany will be able to maintain this number of divisions for a short time, but as operations develop the necessity for providing reinforcements is likely to bring about a reduction in strength.

68. Thus in 1942, neglecting altogether the effects of air attack on industry, severe shortages of food and oil which are likely to prove exceedingly serious even in the winter of 1940, Germany is capable on existing potential of maintaining theoretically an army sufficiently large and powerful to operate on a number of fronts.

German Air Forces.

69. In general terms the German Air Force consists at present of an establishment strength of 5,800 first line aircraft (including 3,300 bombers and 1,700 fighters), together with substantial reserves.

This force is distributed from Trondjem to Brest; a very large percentage of it is based on temporary aerodromes in occupied territory, and is believed to be suffering from supply difficulties owing to broken communications. As a result it is believed that the fighting value of the German Air Force for a sustained effort is, until communications are restored and aerodromes improved, considerably reduced.

70. In spite of this, the German Air Force has begun large-scale operations with the probable intention of gaining air superiority over Great Britain in the shortest possible time. Failure to achieve this is likely to deprive the Italians of air assistance, unless the situation arises when this becomes essential to maintain Italy's war effort.

71. Distrust of Russia's policy may entail the strengthening of Germany's eastern frontier, but it is improbable that other than fighters would be despatched. This factor, however, may well limit the extent of German air action against this country, since Germany must view with some anxiety the prospect of being left dangerously weak in the air while the strength of Russia's Air Force is still in being.

72. It is impossible to produce a forecast of what the German Air Force may consist of at any given date in the future. Existing production potential is certainly not adequate to maintain even the present first-line establishment in the face of sustained operations involving a high rate of wastage, once stored reserves are exhausted. On the other hand, if the German Air Force is able to enjoy prolonged periods of comparative inactivity, or of only sporadic operations, they may well be able to effect substantial increases in the first line and rebuild depleted reserves, which would enable them to sustain operations at a high rate of intensity for a considerable period. The supply of trained crews can probably keep pace with that of aircraft. Sufficient aviation fuel and stocks are likely to be available
to enable the Germans to operate a large proportion of their air force during 1941. Action to accelerate the oil crisis in Germany may appreciably curtail operations early in 1942.

**Italian Navy.**

73. The composition of the Italian Navy on the 1st August, 1940, and an estimate of its strength in August 1941 and August 1942 are given below. Further details are given in Appendix IV:

<table>
<thead>
<tr>
<th>Type</th>
<th>August 1, 1940</th>
<th>August 1941</th>
<th>August 1942</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battleships</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>8-inch Cruisers</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>6-inch Cruisers</td>
<td>11</td>
<td>11</td>
<td>23</td>
</tr>
<tr>
<td>(12 with 5.3&quot; guns)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Destrovers and T.Bs.</td>
<td>104</td>
<td>104</td>
<td>136</td>
</tr>
<tr>
<td>Submarines</td>
<td>122</td>
<td>122</td>
<td>142</td>
</tr>
<tr>
<td>M.T.Bs.</td>
<td>101</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>

Apart from 4 old cruisers and 15 pre-1918 torpedo boats not included in the above totals, the Italian Fleet is of modern construction and calls on material and labour for maintenance are not likely to be heavy. Building facilities would permit of a greater increase in destroyers and submarines than is shown above, but such further expansion could probably only be achieved at the expense of the other armed forces. The increased intake of officers and recruits during recent years should permit of the necessary trained personnel being available to man new construction as completed.

74. Morale is difficult to assess, particularly in view of the conscript element, but the Fascist regime has undoubtedly done much to improve matters. The meagre information available since the outbreak of war with Italy suggests that the Navy as a whole is not over-enthusiastic about the war, but, until she receives a decisive defeat at sea, there is no reason to suppose that morale will deteriorate rapidly.

**Italian Land Forces.**

75. The strength of the Italian Army is at present the equivalent of 90 divisions (1,500,000 white troops), together with 155,000–165,000 native troops. No expansion is anticipated in 1941 and 1942. There is no shortage of trained man-power in Italy, and the problem of personnel wastage need not, therefore, be studied. It is, however, probable that, if armament and equipment is seriously depleted before either August 1941 or August 1942, replacements will be insufficient to maintain an army of the strength shown above unless large quantities are obtained from French or other outside sources. The existing state of morale in the Italian Army is probably good despite its present somewhat indifferent living conditions. It is thought probable that if these conditions and the state of comparative inactivity continue, morale may be gradually undermined. If any serious reverse is suffered morale may collapse suddenly.

76. For internal security it is estimated that 26 divisions would be maintained in Italy to stiffen the Blackshirt Militia whose ability to maintain A.A. and coast defence and internal security is questionable. A balance of 31 divisions would be available for offensive activity elsewhere. Similarly 8 of the 16 divisions in Libya should be free for offensive activity. The present garrisons of the Dodecanese Islands and Albania, 2 and 5 divisions respectively, are the minimum required for security.

77. Pending the receipt of more precise details it is estimated that the Italians are at present operating in British Somaliland with a strength of about 2 divisions. Elsewhere in Italian East Africa the rains are holding up active operations. It is not possible to forecast what forces the Italians could make available for operations outside the colony until the prospects and consequent extent of internal rebellion can be gauged. A recent estimate of Italian forces concentrated along the Sudan frontier is 24,000 (12,000 at Kassala).
78. The supply situation in Italian East Africa makes the continued existence of the local forces most precarious. When Italy entered the war the following stocks were believed to exist in Abyssinia.

Food: 9–12 months.
Fuel Oil: 6–7 months.
Ammunition: 12 months (or less).

It would appear that, should the Italians exercise strict economy in food, fuel and ammunition and if the present scale of attack against Italian East Africa is not increased they might hold out till June 1941, after which date, without external assistance, their situation will be critical. Any action we can take to force the Italians to expend their limited resources will shorten the life of their reserves.

Italian Air Force.

79. The Italian Air Force consists at present of an establishment strength of 2,600 (including 900 bombers and 200 fighters), but the probable strength figure is unlikely to exceed 2,000 aircraft of which 40 per cent. are obsolescent. Italy has no reserves of aircraft, as what reserves there were have recently been used to bring first line units nearer to their establishment strength.

Italian production of first line types was, at the beginning of August 1940, approximately 300 aircraft a month which is inadequate to meet a high rate of wastage. Since this date, moreover, the aircraft factories of Fiat and Caproni have been, it is believed, successfully bombed. These factories themselves are responsible for some one-third of Italian first line production. Nevertheless if raw material is still available and factories are not further damaged an increase, possibly substantial, in the first line strength may be attained by August 1942, and could probably be matched by trained crews.

80. So far as can be foreseen, provided that the conduct of the war continues as at present, no great change is likely in the present Italian Air Force dispositions.

The present concentrations in Sardinia, Sicily and the Dodecanese must be maintained to cover the Western, Central and Eastern Mediterranean respectively. The force in Libya must remain to contain Egypt and the air forces in East Africa cannot be moved elsewhere. The only balance of force which might be available for Germany would be about 15 Army Co-operation squadrons, 12 fighter squadrons and perhaps 4 bomber squadrons from Northern Italy. In view of Italy's fear of bombing attacks in her Northern industrial districts, it is most unlikely that she would be prepared to part with the fighter squadrons.

81. It is believed that at present there are some 200 Italian aircraft in East Africa. The present scale of casualties averages 29 bombers and 10 fighters per month. Although it is possible to reinforce the bomber strength by flying out certain types of long-range bombers, the maintenance of supplies of fuel, bombs and stores by air is impracticable. The Italian air force in East Africa is therefore a rapidly wasting asset.

British Empire existing Strengths and Programmes.

Naval forces.

82. The main British Naval forces on the dates shown, without allowing for casualties, will be as below. Further details are given in Appendix V:

<table>
<thead>
<tr>
<th></th>
<th>August 1940</th>
<th>August 1941</th>
<th>January 1942</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Ships</td>
<td>13</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>Aircraft Carriers</td>
<td>6</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Cruisers</td>
<td>57</td>
<td>71</td>
<td>75</td>
</tr>
<tr>
<td>Destroyers</td>
<td>173</td>
<td>224</td>
<td>252</td>
</tr>
<tr>
<td>Sloops</td>
<td>39</td>
<td>43</td>
<td>43</td>
</tr>
<tr>
<td>Submarines</td>
<td>47</td>
<td>61</td>
<td>72</td>
</tr>
</tbody>
</table>

[21611]
Merchant Shipping.

83. The amount of British shipping, excluding tankers, employed at the end of July in the import and export trade of the United Kingdom is approximately 9.3 million tons gross, including Danish and French vessels which were then trading under the British flag. These figures exclude ships of less than 1,600 tons gross (which are now employed only in coastal work including trade with Eire). There are over 24 million tons gross of shipping allocated to the fighting services for armed merchant cruisers, transport and supply, excluding tankers. The tanker tonnage amounts to 3.2 million tons gross of which some is engaged in work for the Dominions, &c, and for the fighting services.

The amount of allied, neutral and foreign tonnage chartered to or shortly coming to the service of the British Government is about 4 million tons gross, including 1.3 million tons of tankers.

84. Towards replacement of losses we are building merchant shipping at the rate of 1.1 million tons gross per annum including tankers. The actual wastage of shipping depends on the fortunes of war and may fluctuate widely. During the first 40 weeks of the war to the 9th June, 1940, the total British Allied and neutral losses were at the rate of 2.9 million tons gross per annum. During the following eight weeks to the 4th August the loss was at the rate of 6 million tons per annum. This, however, was a difficult period for trade protection when many destroyers were repairing damage sustained at Dunkirk, when light forces were engaged in the second evacuation, and when with our depleted forces we had also to make provision for defence against invasion. It is possible, therefore, that the rate of loss may be decreased in future, but it is clear that we may have to face a rate of loss of between 4 and 6 million tons gross per annum or, allowing for new tonnage built, an annual net loss of between 3 and 5 million tons gross. Assuming that we are unable to increase our shipbuilding substantially without a reduction in our Service programmes, we shall therefore have to face a reduction of imports in the second and subsequent years of the war, unless we can obtain help from America or can considerably increase the effectiveness of our trade protection.

Assuming losses at 90 per cent. of the rate experienced in recent weeks the Ministry of Shipping estimates that during the second year of war imports of 42 million tons of goods (excluding oil and molasses) may be realised, but that for various reasons a reduction of 10 per cent. or more on this figure may have to be envisaged.

Land Forces.

85. The present strength of the imperial forces (excluding the army in India, minor garrisons and the forces in the Middle East) totals approximately 3 armoured and 37 other divisions. Many of the forces are only partially equipped and largely lack ancillary units. Any attempt, therefore, to arrive at an exact total of fully trained and equipped formations would only give rise to misleading results.

86. The present Army equipment programme is intended to equip and maintain the following formations:

By June 1941—

3 Armoured Divisions.
7 Army Tank Brigades.
33 Divisions supplemented by:

(a) The replacement of net losses in the field abroad.
(b) The special requirements of Home Defence.

As soon after June 1941 as possible and not later than the Spring of 1942—

A total of—

5 Armoured Divisions.
10 Army Tank Brigades.
50 Infantry divisions, supplemented as above.

How successfully the programme can be realised depends on a number of factors which are discussed in paragraphs 94 to 99 and 101 to 107 below.
Air Forces.

87. The present strength and composition of the Royal Air Force includes a metropolitan force with a first-line strength of 320 heavy and 293 medium bombers, 1,260 fighters, 366 coastal and 168 Army Co-operation aircraft. This aircraft establishment is more than fully matched by trained crews, though it has not yet been possible to bring all squadrons, notably in the Bomber Command, up to their full establishment of crews.

The first-line units are backed by a substantial reserve of aircraft. But the backing of crews, which is represented not by an actual reserve but by the output from the war training organisation, is not yet adequate to meet a high rate of battle casualties over a prolonged period let alone further immediate expansion.

88. Our present air strength overseas is far from adequate to meet requirements, and many of the squadrons are still equipped with obsolete types of aircraft. Reserves in aircraft on the outbreak of war with Italy were in the nature of 100 per cent.; but the reserve aircraft are far from being fully matched by trained crews. Measures are already under way to improve the position, especially in the Middle East. But, now that substantial progress has been made towards meeting the essential requirements of security in the United Kingdom, it is essential to accelerate as much as possible the re-equipment and reinforcement of our Air Forces abroad. In this respect the collapse of France, and the fact that we can no longer refuel in France or Tunisia, has very gravely increased our difficulties, and has constituted a reinforcement problem which will require special shipping and other measures to solve.

89. It is not possible to give an accurate estimate of the strength or composition of the Air Force at any given date in the future. Its expansion is governed by a variety of factors which are described in paragraphs 108 to 111. The "target" programme on which the Air Ministry are working is shown in paragraph 271. It aims to raise the first-line strength to 5,623 aircraft at home and abroad, including a metropolitan bomber force of 1,600 heavy bombers and 400 medium bombers. The achievement of this programme will take a considerable time and cannot come about in under two years. No closer indication of the rate of expansion can be given than that, unless very prolonged and intensive operations intervene, there will be a substantial increase in the first-line strengths in the summer of 1941, and that in future expansion the emphasis will be laid upon the striking force rather than upon the fighter force to which our main effort has of necessity been directed in the first year of the war.

Summarised Comparison of Armed Forces.

90. A comparison of our own and the enemy forces shows that at sea our superiority over the combined German and Italian navies should be maintained up to August 1942. Enemy submarine activity, however, is likely to increase. The active hostility of the French naval forces would add very considerably to our naval commitments, but should not dangerously weaken our control. So long as the German and Italian navies remain in being they will contain our naval forces in European and Atlantic waters and we shall have little to spare for other theatres. The morale of the Italian navy is uncertain and might deteriorate rapidly if we could engage it successfully. If Italy should be defeated we should be in an overwhelming position vis-à-vis Germany at sea.

91. The German army, supported by a very large air force, is of a strength which precludes the possibility of the relatively small field force that we should have available in 1941 being able to strike successfully against Germany herself. Calculated on potential alone Germany in 1942 could still dispose of a force for offensive or defensive operations greatly superior in numbers to the strength we could have available for use on the Continent by that time. By 1942, however, the effects of the blockade and air attack, and the commitments in occupied areas, may have considerably reduced the mobility and efficiency of both the German land and air forces. Moreover, by the summer of 1941 our air striking power should have substantially increased and in 1942 should be immensely formidable.

92. While Italy enjoys a superiority of land and air forces in the Mediterranean and Middle East in the present period, shortage in armaments
and equipment are likely to prevent any large expansion of her forces. If we can reinforce our garrisons in the Middle East, Italian action alone is unlikely to achieve a major success. In any event the morale of the Italian population and fighting forces is not likely to remain good. In East Africa the Italian forces are a wasting asset and although they may have temporary successes their situation will be critical after June 1941, even if they exercise strict economy in the expenditure of their limited resources.

Factors affecting the Achievement of Service Programmes and their Expansion.

93. We have shown above the military forces that we now possess and the present programmes for the expansion of these forces. We now draw attention to certain of the more important factors which affect the achievement of these programmes and any further expansion which, from the military point of view, may be necessary.

General remarks on production.

94. The subject of the war productive potential of the British Empire and our ability to complete the Service programmes at which we are aiming within a given time, covers so vast a field, and includes so many technical factors on which we are not qualified to give an opinion, that we cannot do more than draw attention to some of the more important aspects of the subject. In preparing this appreciation, however, we have sought the advice of representatives of a number of Service and Supply departments, including the Ministry of Aircraft Production, the Ministry of Supply and the Survey of Economic and Financial Plans, with the object of assisting us in assessing whether the programmes that we would desire on military grounds are, in fact, at all within the bounds of possibility on the grounds of supply. In doing so we have gained the impression that there may be room for improvement in the system of co-ordination of supply and production, as well as in certain technical methods affecting both labour and material.

95. The principal factors in any production programme, in which conflict of requirements may arise between the three Service programmes and that of merchant shipping, are as follows:—

Labour.

(a) The achievement of the programmes in full will necessitate a very large increase in the labour force, an increase, however, which we are advised is within our capacity provided it is properly organised. Two possibilities in particular commended themselves to us as being worthy of examination. First, the possibility of a great economy in skilled labour by the more widespread adoption of specialised instruments, jigs and fixtures, and by the further application of skilled labour to the making of jigs and fixtures which would enable the same work to be done at a considerably increased rate of output by relatively unskilled workers. Secondly, the possibility of considerable extension in the scope of the labour field by a revision of the system of reserved occupation, whereby the occupation and not the individual is reserved.

The Minister of Labour and National Service has recently recommended* the appointment of a committee from the interested departments to revise the estimates of man-power required for the Service programmes, and to translate those programmes into labour requirements; we hope that the scope of that committee will be extended to embrace the problems such as those outlined above.

Raw Material, particularly Steel and Aluminium, Machine Tools and Drop Forgings.

(b) We understand that in this field there may well be difficulties in meeting the full requirements of the programmes we recommend, and that there

* Paper No. PX (40) 56.
are serious possibilities of conflicting requirements. For instance, we were advised that the recommendation in paragraph 236 (b) as to the resumption of the naval construction programme would conflict in its requirements for steel and heavy presses with the recommendation as to an increase in the tank programme recommended in paragraph 251, which, in its turn, would conflict in respect of drop forgings with the requirements of the aircraft programme set out in paragraph 271.

96. These difficulties cannot be resolved by calling on the productive capacity of the United States. It is clear that we must regard the war potential of the British Empire and of the United States as one common pool; and we may well find our own programmes conflict with the requirements of the rearmament programme of the United States themselves. It was, however, suggested in the course of our discussions that improved efficiency, particularly in the sphere of economy of skilled labour, might be secured by obtaining from the United States those items in which the United States industry is specially prolific, such as motor transport, thus releasing skilled labour from the manufacture of wheeled vehicles in this country. It is clearly impossible to assess, without the most detailed and careful examination, whether, to what extent, and when the required programmes could in fact be met by the adoption of specially vigorous methods both in this country and the United States, or the direction and extent to which the existing programmes, or any modifications in those programmes, will conflict. It seems to us essential, however, that this examination should be immediately set on foot.

97. In addition to the factors mentioned above, there are certain others of which account must also be taken in considering our war industrial development:

Air attack on industry.

(a) Our industry has not yet been subjected to a heavy scale of air attack and it is therefore difficult to assess the effects of such an attack on production. The attack on factories, ports, shipping, the internal transportation or the electric transmission systems might seriously affect our programmes. We understand that in the case of aircraft production allowance is being made for approximately 30 per cent. loss of working time due to air attack, but that no allowance has been made for damage to factories, machine tools, other industrial equipment or the delay which may be caused by the dislocation of communications.

U.S.A. rearmament programme.

(b) The full resources not only of this country, but also of the United States and of the Empire, may not prove sufficient to enable us to complete in the period prescribed the whole of our programmes simultaneously with active rearmament in the United States, unless special steps are taken to curtail domestic consumption in that country. This applies not only to certain raw materials, but also to certain classes of productive capacity and skilled labour.

Finance.

(c) Unless we can obtain very large credits, the difficulties of providing foreign exchange, especially dollars, to finance our purchases from abroad of finished armaments and raw materials, in the quantities required, may limit the amounts that we shall be able to obtain from these sources.

98. Since the outbreak of war production has lagged behind, in many cases far behind, the programme. We are advised that even if it is assumed that our industrial equipment and internal communications suffer no substantial damage from enemy action, and that imports of raw materials can be maintained on an adequate scale, it is not possible, even after taking account of supplies of finished armaments likely to be received from the United States, to state with certainty that the various stages of our programmes, particularly that of the Army, will be completed in the time prescribed. We understand, however, that a prodigious effort will be required to expand the engineering industries if the programmes...
are to be fulfilled. It appears that the intake of labour required will be in the
neighbourhood of 50 per cent. greater than that which has been achieved in recent
months, and will be double that achieved in the peak period of the last war. If
the Mission which has now gone to India is successful in achieving some develop­
ment of the productive capacity in India and Australasia, some relief at home may
be possible, but it seems likely that these countries would depend to some extent
upon the United Kingdom and the United States of America for skilled labour.

Field Army Equipment Wastage and Maintenance Rates.

99. Our attention has been drawn to one factor in the Army rearmament
programme which we are advised is particularly important; the provision
of ammunition and of equipment for the maintenance of the field army, with
special reference to the periods during which such provision must be made.

The actual percentage rates for wastage of equipment and for expenditure
of ammunition have been carefully revised in the light of recent experience. The
method of application of these rates, however, requires no less careful considera­
tion, since it may have a great effect upon the output required from industry
during the period when divisions are being provided with initial equipment. The
equipment programme on which the Ministry of Supply is now working includes
provision for wastage equal to 300 division/months by Z + 21 month, which,
in view of the changed situation, is, in our opinion, an over-insurance. We
suggest in paragraph 247 a basis upon which this figure should be re-examined.

The provision of ammunition involves a very considerable tonnage of steel
and is therefore, liable to come into competition with the requirements of the
other Services. While it is clearly necessary to establish the capacity to produce
the requirements of expenditure should active operations begin, it is also necessary
to avoid extravagant provision. A major difficulty is likely to be that of
arranging for the sudden expansion from "equipping" rates to "expenditure" rates.
We understand that the question of ammunition requirements is to be kept
constantly under review, starting at the end of August 1940.

The Ministry of Supply are now engaged in preparing their first quarterly
long-term forecasts of the rate at which equipment and ammunition is likely
to be forthcoming. When these estimates have been received it will be possible
to assess the degree to which the Army programme is likely to be met.

Naval Programme.

100. The existing naval and merchant shipbuilding programmes, including
the suspended part of the naval programme, are designed to make full use of
available and potential slips and engine shops. As far as can be judged it would
not be possible to increase our building capacity without employing a dispropor­
tionate amount of the labour and material on which the other Services also have
calls. Whether it would even be possible to take up the suspended naval
programme without dislocating the existing naval programme and that of other
Services, cannot be assessed without further detailed enquiry. Construction of
special vessels such as landing craft will react on other shipbuilding programmes
and it is possible that a clash in requirements for tank and warship constructions
may occur.

Army Programme.

101. Apart from the provision of equipment discussed above, the size of the
Army which we can raise and maintain in any particular period of time, depends
upon the man-power available, training, and the rôle which the Army is designed
to carry out. We deal with the rôle of the Army in paragraphs 184 to 188 below.
We now set out the situation in respect of man-power and training.

Man-power resources in the United Kingdom.

102. The size of an army that can be raised depends, inter alia, upon the
man-power available and the wastage due to casualties. This wastage naturally
varies according to the theatre of war and type of operations. For instance,
wastage allocated to Home Defence in the United Kingdom will be considerably
less than the wastage incurred by a numerically equal unit engaged in field
operations against the enemy. Moreover, any interim unforeseen operations will
reduce the number of men available for the army at the date for which any
estimate is made.
103. If we assume that—
(a) The present schedule of reserved occupations is unaltered;
(b) Allowance has been made for industry and the expansion of the Royal
    Navy and the Royal Air Force;
(c) The active operations in which the Army is engaged during 1940 and
    1941 approximate to those set out in paragraph 247 as the basis for
    estimating equipment wastage.
(d) The equivalent of 6 British Divisions are employed in the defence of
    our overseas possessions, and the equivalent of 10 British Divisions are
    reserved as a Home Field Force, both of these being included in the
    total number of British Divisions shown below;

then it is estimated that there would be sufficient man power available in the
United Kingdom to provide an Army of the following size in 1942, and to
maintain it for two years:—

**Age limit 20 to 40 years.**

<table>
<thead>
<tr>
<th>Total</th>
<th>39 Divisions—</th>
<th>57 Divisions—</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Plus A.A. Troops on their present scale (200,000 Home and overseas)</td>
<td>Plus A.A. Troops on their present scale (200,000 Home and overseas)</td>
</tr>
<tr>
<td></td>
<td>and static garrisons (overseas)</td>
<td>and static garrisons (overseas)</td>
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</table>

**Age limit 18 to 50 years.**

<table>
<thead>
<tr>
<th>Total</th>
<th>30 Divisions—</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Plus A.A. Troops on their present scale (200,000 Home and overseas)</td>
</tr>
<tr>
<td></td>
<td>and static garrisons (overseas)</td>
</tr>
</tbody>
</table>

Note.—The figures above can only be achieved by a rigid economy of army
man-power, coupled, wherever possible, with dilution by A.T.S., &c.
Any increase in A.A. troops will correspondingly decrease the number
of divisions available in 1942. If the increase in A.A. troops now under
consideration* (and involving an additional 489,000 men in A.A. units)
is approved in full, the above figures for the British Army in the spring
of 1942 would fall to 26 divisions for an age group of 20-40 years and
46 divisions for the 18-50 age group.

**Imperial and Allied Resources of Man-Power.**

104. In addition it is reasonable to hope that man-power for the following
number of divisions could eventually be provided from the Dominions and
India:—

<table>
<thead>
<tr>
<th>1942</th>
<th>1942.</th>
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Apart from the forces which the man-power of the British Empire may
enable us to raise, there are small Allied and French contingents already in the
United Kingdom and the Middle East, all of which will eventually have to rely
on British equipment. Moreover, as soon as the progress of operations enables
us to re-occupy parts of French territory and possessions, a further supply of
man-power is likely to become available, but it would be dependent on British
equipment.

Anti-German elements in many enemy-occupied countries will look to us to
supply them with the arms and equipment required to undertake rebellion, and
before victory is gained a number of Allied countries would probably be prepared to
place forces in the field if equipment can be provided.

**Conclusions on Man-power.**

105. We may conclude, therefore, that the supply of man-power will not
constitute a limiting factor in the execution of our existing equipment programme
providing there is no heavy increase in A.A. troops. Moreover, in these circumstances an expansion of our forces and foreign forces formed under our aegis would be possible in the future, provided that we were in a position to supply the necessary equipment. With an age limit of 20-40 years, the maximum total to which we could expand from the man-power point of view during 1942 is 39 British plus 26 Dominion, African and Indian Divisions, plus (say) 2 Allied Divisions = 67 Divisions, including A.A. troops on their present scales and static garrisons. If the age limit is expanded to 18-50 years, we could achieve, from the man-power point of view, an army of 57 British, plus 26 Dominion, &c., plus (say) 2 Allied = 85 Divisions, including A.A. troops on present scales and static garrisons. It is therefore evident that if we are to have an army of 55 divisions, a large increase in A.A. troops is only possible if the age group is extended to 18-50.

Training.

106. An important limitation to the rate of expansion of the Army is the supply of leaders, a difficulty with which the Germans were also faced during the expansion of their Army. In order to raise the standard of training and leadership through the Army as a whole it is necessary to make wide use of Regular Army personnel for training purposes.

Armoured Formations.

107. We are advised that any considerable increase in the proportion of armoured divisions in the present Army programmes could not be achieved without interference with the production programmes of the other services (see paragraph 251).

Air Force Programme.

108. In the expansion of the Air Force to the size outlined in paragraph 89, the most important immediate limiting factor is the training of aircraft crews. Various factors, notably the rapid expansion of the Metropolitan fighter force made necessary by the new situation, have already resulted in our first-line strength getting out of phase with the war training organisation necessary to maintain it. Before we can take advantage of the great increase in aircraft production aimed at in the Air Ministry programme we have first to expand the training organisation that is essential if the aircraft are to be matched with trained crews. This can only be done at the temporary expense of our first-line resources, a proportion of which must be diverted to training purposes. This factor must inevitably limit severely the strength of our fighting force during the period in which the full programme is being built up. The training factor, moreover, prohibits the adoption of a more ambitious target programme if it is to mature within a reasonable time, since the greater the programme aimed at the greater must be the diversion of resources, even to the point of an actual reduction of existing first-line strength.

109. Certain problems affecting training will limit expansion unless satisfactorily solved. The first is the provision of sufficient numbers of trainer aircraft, and the second the lack of suitable training facilities in the United Kingdom. This second problem has arisen as a result of the enemy’s ability to operate over the whole of our training area; not only does this adversely affect flying training, but also the activity of the schools interferes with the working of our fighter defence. In order, therefore, to make the necessary progress in expansion it has become a matter of urgency to implement schemes for transferring flying training schools in the United Kingdom to the Dominions and even to the United States.

110. The aircraft programme is based on the production resources of the United Kingdom supplemented to a considerable extent by the production potential of the United States. Its achievement assumes that the aircraft industry will continue to receive priority in certain essentials, such as machine tools and aluminium.

111. If the above conditions are fulfilled it is probable that the “target” programme will be achieved. The date of completion of the programme or even the rate of expansion cannot be specified with any accuracy. It is impossible to assess, for example, the date at which the production of trained crews will over-
take that of operational aircraft. Moreover, any estimate of future air strengths will depend on the scale and intensity of operations, the rate of wastage in crews and aircraft and the extent to which production will be interrupted by enemy action—all of which are impossible to forecast with any reliability.

Conclusions on Factors affecting the Achievement of Existing Programmes.

112. To sum up, the main factors that may limit our productive ability to build up our forces are labour, supply of raw materials and specialised machine tools, forgings and pressings. The effect on industry of air attack, and the effects on our supplies resulting from attack on shipping and ports, may make great differences to our productive capacity. Sudden changes in production plans are liable to upset badly the smooth running of all the programmes. Such changes should, therefore, be avoided if possible or introduced only after careful planning.

113. In general we may conclude that the existing programmes are a reasonable target figure for industry. But whether or not they can be achieved depends upon—

(a) The extent to which our industry and imports are interrupted by air and sea attack.
(b) The extent to which the United States productive capacity is placed at our disposal.
(c) No violent change being made either in the programmes or in their priorities.
(d) The extension of the age group to 18-50 if there is to be any large increase in the numbers of A.A. troops.

We would draw special attention to the need for the detailed investigation and for the setting up of adequate co-ordinating machinery (paragraph 96).

PART II.—COURSES OF ACTION OPEN TO THE ENEMY.

Germany’s Aims.

114. Whatever Germany’s ultimate aims may be there is one immediate aim which she must attain, that is to break the blockade of Europe. Concurrently, she must ensure the military security and economic stability of Europe, which she cannot do without eliminating the United Kingdom as a base for operations and without breaking our command of the sea.

Italy’s Aims.

115. Italy’s first aim has always been to gain complete naval control in the Mediterranean, and eventually to control the Suez Canal and Red Sea route as a means of communication with her East African Empire. In addition, she aims at establishing for herself a dominant position in North Africa, overthrowing the British position in Egypt and thus linking up her North and East African possessions. The collapse of France, leaving us single-handed in the Middle East, and the freedom Germany now has to support Italian forces in this area, gives Italy a better chance of achieving her aims than ever before.

The Time Factor.

116. As the blockade of Europe develops so will the necessity for quick action by the Axis Powers become progressively important. There must be a limit to the time the millions in Europe will quietly endure the increasing privations which the blockade will enforce; and large armed forces are liable to deteriorate if maintained for long in comparative idleness under war conditions. There is also a limit to the period that Germany can retain her present advantage in land and air armaments. Our economic survey has pointed to the fact that the Axis Powers will be dangerously deficient in certain vital commodities next year, although we cannot count upon this leading to an early collapse.
We are advised that the shortage of oil will shortly become so acute in Europe that Germany will be compelled either to seek an early decision against this country or to take steps to obtain further resources, which she can only gain by opening to tranquil trade the sea communications between the Black Sea and Italy and France. If she does not obtain these additional resources the effect of the oil shortage will be to restrict her strategic flexibility all the sooner.

Abyssinia is isolated except by air from Axis territory and does not possess stocks sufficient to last her for more than a year. If Abyssinia is to be relieved, early action will have to be taken by an advance against the Suez Canal.

The time factor and the urge for spectacular military action inherent in the Dictators' temperament leads us to conclude that there will be no long respite before the next move.

Courses open to the Enemy.

117. Briefly, there appear to be five main courses of action open to the enemy:

(a) Invasion of the United Kingdom.

(b) Naval and air attack on our shipping and ports with a view to cutting off supplies from the United Kingdom and breaking the blockade of Europe, combined with air attack on industry and morale.

(c) An advance South-Westwards towards Gibraltar and North-West Africa.

(d) An attack on Egypt and the Suez Canal from Libya.

(e) An advance South-Eastwards through the Balkans towards Asia Minor and Iraq.

Invasion of the United Kingdom.

118. Invasion of the United Kingdom would, in any event, be an immensely formidable undertaking and is becoming increasingly so every day. The result of failure on German prestige in Europe and on German morale at home would be so grave that it is probable that Germany would not attempt such a gamble in the immediate future unless she felt that no other course would offer her results in time.

In addition, it seems probable that, owing to a variety of factors, including the difficulty of sustaining a very high rate of effort from hastily improvised bases in France and with indifferent lines of communication, the German Air Force may not be in a position to develop its maximum scale of attack for some time to come. This fact, together with the unsuitability of weather conditions in the winter, suggest that Germany may not attempt an invasion of this country this year.

Nevertheless, this course holds out a hope of immediate and decisive results and we must assume that Germany is making all preparations to carry it out, if conditions should be suitable.

Large-scale raids on the Shetlands, Faeroes and even Eire are always a possibility.

Attack on Sea Communications.

119. The second course open to Germany is to attack our Naval forces, shipping and ports with a view to weakening the United Kingdom by a process of attrition and relieving to some extent the pressure of the blockade of Europe. Such attacks will probably be combined with attacks on our industry, particularly aircraft factories, and on objectives calculated to lower civilian morale. They would be accompanied by an intensification of the propaganda campaign.

Germany might attempt to carry out this course from her present position in Europe. She might, on the other hand, try to improve her strategic position to do so by an attempt to capture Iceland.

This course, involving as it does the use of only limited land forces, could be carried out simultaneously with operations in other theatres. If, as seems possible, Germany decides to postpone an attempt to invade the United Kingdom, she is almost certain to pursue this course, since she would hope that the process of attrition would create those very conditions in which invasion would have the most chance of success.
An Advance to the South-West.

120. A third course for Germany to adopt would be an advance south-westward towards Gibraltar and North-West Africa. If she were able to induce the Spanish Government, who are at the moment opposed to war, to co-operate with her, an advance through Spain to the Straits would be a comparatively simple operation. German mechanised forces are already concentrated close to the Spanish frontier. In the event of Spanish co-operation, Portugal would probably be forced to follow suit.

If Spain should refuse to co-operate, Germany might still be able to deny us the use of the Western Mediterranean by establishing air forces in French Morocco. A preliminary to this might be the occupation of the Southern coast of France.

121. The capture of Gibraltar would be a serious blow to our prestige, and its loss as a naval base would give the Axis control of sea communications in the Western Mediterranean. This would result in complete German domination of North Africa and added security to Italian communications with Libya.

122. Unless we forestall her, Germany might attempt to extend her operations against our sea communications by seizing the Azores, Cape Verdes and the Canaries. Such a move would seriously threaten our sea communications and involve a weakening of our control in the Atlantic. A further development would be the infiltration of agents, plentifully supplied with gold, in French North and West Africa. Although initially this action might be on a small scale, it could ultimately become a very serious threat to our West African interests. Should Freetown become untenable the reactions on our Atlantic communications would be most serious. Moreover, if the threat were to extend further south to Takoradi, our air reinforcements route to the Middle East would be endangered.

123. An advance to the South-West, while bringing no immediate economic benefits to Germany, would therefore place her in a better position to weaken the blockade and threaten our sea communications. To carry it out would require little diversion of effort and it might well be combined with Course (b).

An Attack on Egypt from Libya.

124. It has been shown above that the commodities of which Germany is most seriously deficient are oil, natural fibres and food; while it is essential for Italy to relieve Abyssinia within the next few months. The nearest source of oil is in the Black Sea. If Germany could maintain tranquil trade from the Black Sea to ports in Italy and France she might increase her annual import of oil by some 3 million tons (see paragraph 34). The obstacle to such tranquil trade is the British Eastern Mediterranean fleet based on Alexandria.

Libya is a suitable base for an attack on Egypt and its sea communications in the Central Mediterranean are reasonably secure in present conditions. On the other hand Benghazi is the only port of importance and the absence of any alternative makes it a particularly favourable objective for air attack.

The loss of Egypt and the Canal would have an immense psychological effect in the United Kingdom as well as throughout the Middle East.

125. Egypt is also a rich source of cotton. A successful attack on Egypt from Libya would therefore bring the enemy appreciable economic benefit which might, to some extent, improve her economic position and would certainly hearten the Italians. This course is an extremely likely one and the enemy may well decide to launch an attack in September when climatic conditions are suitable and in the hope that British reinforcements will not have arrived. They have ample forces to undertake it simultaneously with any of the other courses discussed in this section of the paper.

An Advance south-eastwards through the Balkans.

126. Lastly, there is the possibility that Germany might advance through the Balkans on Asia Minor and Iraq in pursuance of her traditional Drang Nach Osten policy. Her immediate aim would be to gain control of the Straits—and, ultimately, to control the oil supplies of Iraq.
Unless at the same time she were to attack Egypt from Libya and drive the British fleet from the Eastern Mediterranean, this course would be of little use to her; and in any event it would be unlikely that she could obtain oil from Iraq at least until 1942, since we should damage the oilfields and destroy the pipe lines at power stations, in accordance with plans already prepared.

127. This course, too, presents many disadvantages to Germany. Germany at present enjoys the economic resources of the Balkans to the limit imposed by transport facilities. Military operations in that area would inevitably reduce these facilities. Internecine struggles might be stirred up still further reducing the resources and transport. The hostility of Turkey might well be involved and it would lead to a clash of interests with Russia.

There are at present no indications of any offensive concentration against the Balkans.

128. In view of the many disadvantages of this course, and the lack of immediate advantages, it is not considered that it is a likely course for Germany to adopt.

129. On the other hand we must anticipate the possibility of an Italian advance through Greece towards the Aegean, with the object of establishing bases to facilitate control of the sea communications from the Black Sea and, at the same time, protecting Italian communications to the Dodecanese.

Conclusions.

130. It appears certain from the time factor that Germany and Italy will be driven to further action in the near future. They might adopt any of the courses we have discussed, and it is therefore necessary, so far as possible, to secure against them all. In our opinion, however, the courses which appear to offer the enemy the best probability of success and the greatest economic advantages are:

(a) Naval and air attack on shipping and ports with a view to cutting off supplies from the United Kingdom and breaking the blockade of Europe, combined with air attack on industry and morale, and an intensification of the propaganda campaign.

Combined with—

(b) An attack on Egypt from Libya with a view to driving the British fleet from the Eastern Mediterranean, obtaining the cotton of Egypt, ensuring tranquil trade for the transport of oil from the Black Sea and eventually relieving Abyssinia;

and/or—

(c) An attack south-westwards with a view to obtaining control of the Western Mediterranean, improving her position for attacking our trade and weakening the blockade, and ultimately creating a threat to our interests in West Africa.

131. At the same time she will not lose sight of the possibility of invading the United Kingdom, and will complete all preparations so as to be able to strike when she considers conditions are suitable. We have not attempted to assess in any detail the effect on Germany of an abortive attempt to invade this country. While the effects of such a failure are unpredictable it is clear that they would react greatly in our favour in non-belligerent countries.

132. It appears unlikely that Germany will advance south-eastwards through the Balkans in the immediate future, but Italy may move into Greece.

133. Above we have only dealt with the direct methods of attack which Germany and Italy may adopt. In addition, they are certain to make use of every political subversive and fifth column stratagem which would damage our interests and increase our difficulties whenever the opportunity offers.
PART III.—EXAMINATION OF OUR STRATEGY FOR THE DEFEAT OF GERMANY.

134. In this part of the paper we examine the methods open to us for the defeat of Germany, and deduce the general policy which we recommend for adoption.

It is clear from paragraphs 58 to 92 that Germany and Italy have a very great numerical superiority of force, both on land and in the air. Germany also has a considerable lead over us in armament production, and it will be many months before we can make up the lost ground.

Although in certain important spheres, particularly in the exercise of economic pressure and air attack, our strategy has for some time been one of relentless offensive, our enemies have at present the strategic initiative on land and, to some extent and in some theatres, in the air; for this reason we consider first our defensive strategy.

Defensive Strategy.

The Threat to our Interests.

135. We have expressed the view in Part II of this Paper that Germany will soon be compelled either to seek an early decision against this country or to take immediate steps to obtain further economic resources. We have discussed the courses of action open to her to achieve these aims, from which we conclude that the following British interests are threatened by German or Italian action in the near future:

(a) The United Kingdom.
(b) Our shipping, particularly in Home Waters and the Atlantic.
(c) The Middle East, particularly Egypt.
(d) Our West African colonies.

136. In addition we have pointed out in paragraph 14 that the attitude of Japan is likely to continue menacing, while Russia may attempt to dominate Iraq and Iran. We must, therefore, consider our Far Eastern possessions and our interests in Iraq and Iran as threatened, although the threat may be a less immediate one.

137. While it is obviously desirable to secure every part of the British Empire against enemy aggression, it is clear that, with the forces at our disposal, the allocation of defence resources to different areas must be directly related to the extent that each will contribute to the defeat of Germany.

Security of the United Kingdom.

138. The security of the United Kingdom is obviously vital to our war effort and must come first. We must secure the United Kingdom against invasion and achieve such a degree of protection against air attack that the war effort of the country can be maintained at the highest level; the morale of the services and the civil population must also be maintained in the face of air raids, possibly seaborne raids, possibly long periods of suspense and boredom and certainly intense propaganda.

139. Defence against invasion employs to-day a very large number of active divisions, which are in varying stages of training and equipment. Our policy must be to improve our static defences and hasten the raising and training of our Home Defence and Home Guard units in order to release troops of the field army. Eventually, as our defences and air power become more effective, as the divisions receive their full equipment, and as the threat recedes with a restriction of the mobility of the German forces, it will be possible to reduce the present number of divisions on Home Defence duties and employ them elsewhere.

At the same time, invasion is a contingency in respect of which we cannot afford to take risks, and to meet it we must always keep a proportion of active formations in the United Kingdom.
Security of our Sea Communications.

140. To meet, inter alia, the threat of invasion it will be necessary to keep in European waters a fleet of adequate strength to beat the combined German and Italian forces. For this purpose forces must be maintained at home and also based, as long as possible, on Gibraltar. At Gibraltar they are between the Italian fleet and the Atlantic, thus covering our Atlantic approaches, and are available as reinforcements at home in emergency.

Home Waters.

141. At home the loss of the Channel ports and German control of the whole of the Atlantic coast of Europe, except the Iberian peninsula, have materially altered our position for the worse. At present the greatest threat is the operation of submarines, E-boats and aircraft, including minelaying. Already we have had to divert shipping to a large degree to Western ports. Even these, though less vulnerable, are open to attack; and shipping in the approaches to them is already being subjected to attack by both submarines and aircraft. We have shown that the Germans are likely to intensify their attacks on our ports and shipping by all means in their power.

142. The establishment of enemy forces in Eire would further threaten the vital supply line of our Western ports. On the other hand an enemy attack upon Eire would put us in a position to establish naval and air bases there with the consent of the Eire Government; and once the enemy attack was repelled we should have gained considerable advantage in the defence of our Western and Northern approaches.

At present it is clear that Eire is determined to maintain her neutrality at all costs and will not permit British forces to enter the country, unless the enemy had previously invaded it. In view of the time factor involved, we must retain forces in Northern Ireland and in the United Kingdom ready for immediate entry into Eire at the moment the Eire Government are prepared to permit our entry—both to deny bases to the enemy and to occupy them for our own use.

The Atlantic.

143. To-day our trade routes in the Atlantic are more severely threatened than those in the Indian Ocean or the Pacific. This threat would be intensified by a German advance south-westward into Spain and West Africa.

144. Should Gibraltar become unusable by our naval forces, Italian units would have greater freedom of exit from the Mediterranean into the Atlantic.

(a) divert trade from south and east of Singapore across the Pacific and through the Panama Canal.

(b) occupy the Azores and Cape Verde Islands in order to deny their use to the enemy as fueling bases and use the Azores as a base ourselves. The necessary land and air forces must remain earmarked for these operations.

(c) Route shipping in the South Atlantic via Trinidad for bunkers and thence to Bermuda and Halifax for convoy, basing surface escort forces on Bermuda and Halifax.

145. To maintain our naval control in Northern Waters, it is essential to deny the use of Iceland to the enemy as a base and to retain it for our own use. Iceland may also be important as a staging point in an air route by which relatively short-range aircraft can be flown across the Atlantic.

The existing army garrison may have to be slightly augmented and additional air reinforcements should be made available as soon as possible.

146. Freetown is a most important fuelling base and convoy assembly port on our route to the Middle and Far East via the Cape. Its security is discussed further in paragraph 155 below.

Malta.

147. The situation of Malta, frequently under air bombardment, is a difficult one. The morale of the population is good so far, but may deteriorate if
The bombardment is continued over a long period with the defences in their present inadequate state. It is, however, important that Malta should be held. If it could be made secure enough for use as a fleet base we should derive the great advantage of being able to hold the Italians in check with one fleet instead of the two now required (one at each end of the Mediterranean). We should also be able to interrupt Italian communications with Libya much more effectively. From it we could ultimately strike at Italy and at Italian communications with Libya by air, and it is already an important staging point on our air reinforcement route to the East. We therefore consider that the air defences of Malta should be increased.

**The Middle East.**

148. The security of our position in the Middle East is of the utmost importance to our strategy, not only as a base from which to exercise and intensify economic pressure but as a barrier to prevent our enemies from breaking the blockade.

With Egypt in our hands we are in a position to base a fleet at Alexandria capable of interrupting trade from the Black Sea and Balkans to Italy. So long as we hold Egypt we prevent the enemy from obtaining the cotton of Egypt and the Sudan and from breaking out into the Indian Ocean.

Our security in this theatre has been considerably weakened by the collapse of France.

149. The immediate threat to the Middle East is from Italian land and air attack from Libya and Italian East Africa, and by air attack from the Dodecanese. During September a German-Italian attack may be launched against Egypt from Libya; and, as a longer term threat, an enemy advance through Turkey and Syria may be made on Palestine and Iraq. The forces at present in Egypt would not be capable of withstanding a combined attack, even after they had been brought up to strength by the reinforcements now being despatched. The reinforcement of the Middle East is thus clearly a matter of the greatest urgency, particularly in view of the long sea passage involved for reinforcements and equipment coming from the United Kingdom.

150. An important factor in our Middle East strategy is the attitude of Turkey, and there is a danger that, unless adequately supported, Turkey might be driven to accept temporary German protection. With a view to assisting Turkey in meeting a German threat through Syria on Iraq, it is most desirable that a reserve should be built up in the Middle East as soon as circumstances permit.

151. A threat to our oil interests in Iraq and Iran might develop either through the deterioration of internal security, Russian aggression or a German advance through Syria. In view of the importance of these interests it is most desirable that we should hold a force available in India for rapid despatch if the situation demands, but we should avoid a large commitment in the interior of Iraq or Iran. At the worst we must damage the oil organisation in Iraq, destroy the pipe-line and pumping stations, withdraw to the head of the Persian Gulf and deny to the enemy access to the Gulf and the use of the Iranian oil, while retaining the use of that oil for ourselves.

152. If it should ever become necessary to withdraw the capital ship fleet from the Eastern Mediterranean, our position in Egypt and Palestine might become untenable. We might be forced to withdraw towards Iraq and East Africa, but our policy in such an event must be to delay as long as possible an enemy advance to the southward by blocking the Suez Canal; and to hold as a last resort the head of the Persian Gulf, Aden and Kenya. In view, however, of the restrictions imposed by limited port facilities in Egypt and the dangers of the passage through the Red Sea, the evacuation of forces from the Middle East would be a hazardous undertaking.

153. The forces in Aden should be sufficient to withstand any land attacks by local tribesmen, whether Italian troops take part or not. In East Africa, the forces are barely sufficient for local defence, and the appearance of Italian medium tanks in British Somaliland, which may shortly be used in Kenya, makes the provision of anti-tank artillery for East Africa a matter of urgency. The
Italian conquest of British Somaliland involves no new direct land threat to our position in the Middle East, but it increases the number of landing grounds from which Aden and shipping in the Gulf of Aden can be attacked from the air.

**Security of India.**

154. The only immediate threats to the security of India are raids on her coasts and internal or frontier disturbances. Adequate forces must be retained in India to meet these threats. There have been recent indications of disaffection in the Indian Army, particularly among the Sikhs. This may require some increase to the British troops stationed in India.

Russian aggression through Afghanistan or air attack on the cities of the north is always a dangerous possibility, and the development of this threat would have most serious implications. It is, however, not an immediate one, and we are in no position now to take special measures to meet it. Such military resources as India is able to develop should, for the present, be made available to co-operate in the defence of the Empire outside India. It is, however, clear that an important factor in our policy should be the avoidance of war with Russia.

**Security of West Africa.**

155. While the control of West Africa as a whole is an important factor in the maintenance of economic pressure, the security of Freetown as a refuelling base and convoy assembly port is most important for the maintenance of our sea communications round the Cape. An immediate threat to West Africa is the infiltration of Germans, well supplied with money, with a view to taking over control of the local French colonial troops. Raids by such forces, combined with air action, are a danger which our very weak native garrisons in these colonies are not in a position to meet. The threat, of course, would be much intensified in the event of French hostility. The despatch of a British brigade and anti-aircraft defences for Freetown has been recommended to tide over the period before the expansion of the existing colonial troops is complete. In the event of the situation vis-à-vis France deteriorating, it may be necessary to despatch additional reinforcements from the United Kingdom to Nigeria and the Gold Coast.

**Security of the Far East.**

156. The security of our interests in the Far East is dependent primarily on our ability to control the sea communications leading to them. The foundation of our strategy in the Far East must therefore remain the provision of an adequate fleet based on Singapore. Until we have defeated Germany and Italy, or drastically reduced their naval strength, we are faced with the problem of defending our interests in the Far East without an adequate fleet.

157. The retention of Malaya is vital to our security in the Far East, as, so long as we can retain Singapore, it remains a potential base for a fleet in being and so restrict Japan's naval action. It is also most important to hold Singapore for the exercise of economic pressure and for the control of commodities essential to our own economic structure. Finally, Malaya forms a footing from which, eventually, we can retrieve the damage to our interests when stronger forces become available. To hold Singapore entails holding the whole of Malaya and air bases in Borneo, a task for which the present garrison is quite insufficient. In view of the menacing attitude of Japan, the reinforcement of Malaya is a matter of urgency.

158. In the absence of a fleet our naval policy will be to despatch a hunting group, e.g., a battle cruiser and aircraft carrier, to operate from Ceylon. This would have a deterrent effect on Japanese seaborne operations in the Indian Ocean, which is far removed from their bases, but we must expect considerable losses.

159. Should the United States intervene on our side, the situation would be much improved as not only could their fleet provide cover in the Pacific but Japan might well limit her naval operations to waters in which she might expect to have the strategic advantages of concentration of both naval and air forces.
160. Hong Kong is not a vital interest and the garrison could not long withstand Japanese attack. Militarily, our position in the Far East would be stronger without this unsatisfactory commitment. In the event of war, however, it must be regarded as an outpost and held as long as possible, though no attempts should be made to reinforce it.

161. We do not consider that a full-scale invasion of Australia and New Zealand would be practicable, at least until Japan had seized Singapore and consolidated her position in the Far East. The more immediate possibilities would appear to be an extension of her influence in Indo-China and Thailand, followed by attacks on Hong Kong and the Netherlands East Indies, and, finally, on Singapore.

In the event, however, of an invasion of Australia or New Zealand, we could not stand by and see a British Dominion overwhelmed by a yellow race, and we should at once come to the assistance of that Dominion with all the forces we could make available. For this purpose we should be prepared, if necessary, to abandon our position in the Mediterranean and Middle East.

**Offensive Strategy.**

162. The principal methods by which we may bring about the defeat of Germany are considered under the following heads:—

(a) Economic blockade.
(b) Naval action.
(c) Air offensive.
(d) Land operations.
(e) Subversive activities.
(f) Propaganda.

**Economic Blockade.**

163. This course of action involves the denial to the whole of Europe of the vital commodities of which our review of the economic situation has shown her to be deficient. Our examination of the economic factors has also shown that if these commodities can be denied to Europe, Germany will find the successful exploitation or even the maintenance of the internal economy of Europe increasingly difficult. By the middle of 1941, deficiencies, especially of oil, are likely to result in serious unemployment, critical shortages of producers' goods and general economic disorganisation throughout Europe. The unemployment problem may consequently be acute, and, if armament production is reduced, this will be accentuated. While the date by which these difficulties will make it impossible for Germany to maintain large enough armed forces to stave off defeat cannot be predicted, the effect of the oil situation alone on her military freedom of action may soon be far reaching.

164. The requirements of successful blockade will, however, depend on a number of factors, such as our ability to control at source the exports of the producing areas, to control shipping and to maintain our control of sea communications. It is clear that the extensive economic and financial co-operation of the Americas, and particularly of the United States, will be essential to success.

**Control at Source.**

165. To control at source we must pursue a policy which includes pre-emption and financial arrangements and control within the producing areas. The sources of food, oil and other commodities in which Europe is deficient are centred in the Americas, the overseas Empires of Holland, Belgium, France and Portugal, and in the British Empire. Control at source to be effective must be comprehensive. We must aim at keeping all these areas within our system of co-operation and control since, if any one of them were able to break free, the whole scheme might be jeopardised. We must, therefore, induce or compel, by economic pressure or other means, the colonies of the above-named Powers to conform to our system of control at source. We may expect a large measure of success in this direction, but difficulties are bound to arise and certain leakages
and attempts at blockade running will occur. In particular, we must strongly
resist any desire on the part of humanitarian movements in America to relieve the
distress prevailing in Europe.

Control of Shipping.

166. It is possible to prevent supplies reaching Europe to some extent by
the control of shipping. The pressure that we are exerting to gain this control
now takes the form of chartering shipping, and the denial of bunkering, insurance,
convoy and other facilities. We must do all we can to intensify this pressure and
gain a maximum measure of control.

Naval Action to maintain the Blockade.

167. The above forms of control cannot by themselves stop all traffic to and
from German Europe. Nor is it likely that they can be maintained even at their
present standard of effectiveness unless backed by some form of sanction. Naval
action will therefore be necessary and patrols must be maintained to the west­
ward of Europe as well as north of the British Isles. Though on this long
blockade line interception cannot be guaranteed, the introduction of the
compulsory “ship navicert” system has much increased the penalties inflicted
on such blockade runners as we succeed in catching, and therefore the deterrent
effect of the blockade. Under this system we intend to place in prize the vessel
herself, as well as any contraband cargo, in every case of the interception of a
ship in the approaches to Europe, whether inward or outward bound, which has
not a “ship navicert.” The effectiveness of this would be increased if we were
to adopt a policy of sinking ships, that we are unable to send into port, having
first made provision for the safety of their crews.

Areas Important for the Maintenance and Intensification of the Blockade.

168. For the naval action to maintain the blockade, it is essential to secure
certain bases and to deny others to the enemy. In the event of our losing the use
of Gibraltar, our offensive strategy should aim at re-establishing control over the
western gateway of the Mediterranean at the earliest opportunity.

169. Within the Mediterranean the interruption of the trade from the
Black Sea and the Balkans to Italy and Southern France is of great
importance, and for this purpose alone the maintenance of a fleet in the Eastern
Mediterranean is necessary. In existing conditions continuous interruption of
this trade is impracticable, but by sporadic attacks and consequent occasional
interruption we must endeavour to continue to interfere with this route as much
as possible. Our future policy must be directed towards securing bases in this
area from which we could more effectively interrupt this trade route, e.g., Crete
or the Dodecanese.

170. We require in the interests of economic blockade to maintain the use
of naval bases from which we can exercise some measure of control over shipping
at focal points throughout the world. The only important base in this category
outside the Atlantic which is likely to be directly threatened is Singapore. At
present this base is useful in maintaining some measure of control over essential
supplies to Germany via Siberia.

171. The blockade of Europe cannot be complete if the enemy is enabled
to use the Iberian Peninsula as a lung through which he can draw overseas
supplies. Political considerations militate against a policy of treating this area
as enemy territory in present circumstances. Moreover, the iron-ore of Spain is
of considerable importance to us. Nevertheless, it is more to our advantage to
prevent these countries from acquiring surpluses with which to relieve enemy
deficiencies. Our policy should be, therefore, to impose a strict rationing of this
area and to work for a trade agreement which ensures us our requirements in
raw materials in return for a guarantee to them of reasonable supplies.

172. For the maintenance of the blockade it is of the utmost importance to
hold on to our position in the Middle East and to support Turkey to the best of
our ability. Should we lose our hold on the Middle East it would in the last
resort be necessary to carry out extensive action in the Nile lands to debar their
products to the enemy, to destroy the refineries and pipelines in Iraq and
Palestine and stocks of oil throughout this area.
173. If we are successful in maintaining the blockade, the effects on German-occupied Europe will be severe, even if they are not aggravated by other methods open to us. At the same time, they are relatively slow and we could not by this course alone ensure the defeat of Germany before a break occurred in the unity of purpose of the countries on which we must rely for control at source. Furthermore, although it must be our policy to make the blockade generally as rigid as possible, we must be prepared to relax it in such localities and with regard to such commodities as our interests dictate, provided such relaxation does not materially improve the economic condition of our enemies.

Naval Action.

174. Naval operations alone cannot secure the defeat of Germany. Nevertheless, it is on the exercise of naval power that we must depend for that control of sea communications which is essential to the maintenance of the blockade and the security of our seaborne supplies. From the control of sea communications we also derive the ability to pursue a policy of amphibious activity aimed at extending the enemy and tightening the blockade.

175. It must therefore be our policy to attack enemy naval forces wherever possible by every means in our power, as it is by these forces that our ability to control sea communications is most seriously challenged. In particular early and successful action against German and Italian naval forces might well release a fleet for the Far East, which would vastly improve our strategic position in that area vis-a-vis Japan.

176. Although naval operations will always be necessary for maintaining the blockade, it is possible that fewer forces will be required for this purpose as the system of control at source and control of shipping becomes more effective. In addition, we have shown in paragraph 45 that the distributive system of the Continent would be severely handicapped by the disorganisation of coastwise shipping. It must therefore be a part of our offensive strategy to attack this shipping, and operations to this end would be simplified by extending the areas in which at present we have decided to sink merchant shipping at sight.

177. Naval forces will also be required on an increasing scale for safeguarding our seaborne expeditions and their supplies and for direct co-operation in amphibious operations by carrying land and air forces to the point of attack and providing support in landing by bombardment and air action from aircraft carriers. For this purpose we must make provision in our building programmes for special landing craft, ships capable of carrying them and possibly special warships for bombardment purposes.

Air Offensive.

178. The air offensive is the only means we possess of striking immediately at objectives within enemy territory. As a method of defeating Germany it is complementary to the economic blockade since it can aggravate the very shortages and difficulties which the blockade imposes.

179. Oil supplies are especially vulnerable to air attack. The hydrogenation and synthetic plants and refineries are of primary importance since their destruction would eliminate the largest indigenous source of supply. Oil can also be attacked through its means of distribution, in particular, the communications from Roumania by the Danube and by rail, and from Italy and France. The problem which the disruption of Germany's internal distribution system would create has been referred to in paragraphs 44 and 45 above. We have already evidence that attacks on the communications supplying the enemy armed forces outside Germany will further complicate the task of operating and maintaining them. In addition, the dislocation of coastwise traffic will throw an additional burden on the railways and canals of Europe. Congestion and dislocation thus entailed will be further increased with a growing curtailment in the use of motor transport due to lack of fuel, thereby increasing the effectiveness of air attack on railways and canals.

Attack of other key points in Germany, particularly those in her industrial system such as coking plants and power units, will, if undertaken on an ever-increasing scale, dislocate the production of munitions and aircraft and consequently the operational efficiency of her fighting forces.
Destruction of, or damage to, enemy warships existing and under construction, would have a most important influence on the naval situation, and if Japan enters the war against us the German heavy ships would become a primary objective.

Widespread and sustained attacks against the objectives mentioned above, and others extended over the whole of Germany, including the Berlin area, will lower morale to an increasing extent. Production will be affected and war weariness and discontent will spread.

180. Appreciable results have already been achieved in the above directions with a bomber force whose average daily number of sorties is well under a hundred, and whose objectives have hitherto been confined to a limited area in the West of Germany. Moreover, a proportion of our striking effort has to be diverted to a defensive rôle, such as the attack of aerodromes and other objectives, in order to reduce the airborne and seaborne threat to this country.

181. With a large air striking force available for offensive operations, equipped with a proportion of heavy bombers of greater range and bomb load, the effects of air attack may become very important.

In the first place, the shortage of oil may well reach a stage when the mobility of Germany's and Italy's armed forces will be seriously restricted and Germany's hold on the conquered territories considerably weakened. Dislocation of transportation and direct attack on industry will quicken the process of disintegration by reducing employment and lowering the operational efficiency of the enemy forces. Whether, and if so when, the effects of sustained and increasing air bombardment, added to the effects of another winter under blockade and the failure to achieve a decisive victory, will be sufficient to bring about a collapse of German resistance cannot be predicted. It is probable, however, that under these conditions the task of maintaining internal security in Germany, in addition to holding down the occupied territories, will be immense and may lead to disaffection and deterioration in the German armed forces.

182. Italy is vulnerable to air attack both materially and through the uncertain state of her morale. The advantages to be gained by bringing a proportion of our air offensive to bear upon her are summarised in paragraphs 189 to 194 below.

183. An essential part of our policy must therefore be to pursue a continuous air offensive against both Germany and Italy and to develop the scale of our attack as quickly as our resources will permit.

Land Operations.

184. The strength of the German Army and Air Force preclude any possibility of land operations designed to inflict direct defeat on the main German armies, until such time as they have been undermined and weakened by blockade, air action, subversive activities, and propaganda.

185. The part that land operations will play in the defeat of Germany is likely, however, to be a growing one. In the initial phase the army, in addition to providing for the security of the United Kingdom and of our naval and air bases and possessions throughout the world, must be prepared to undertake counter-offensive operations to restore the situation where it has been impaired by enemy action. Operations may also be required to deny potential bases such as the Cape Verde Islands and the Azores to the enemy, and to seize additional naval and air bases for own use. It will also be important to undertake harassing operations by regular and irregular forces, to foster revolt in occupied areas, to destroy enemy resources, and to assist saboteurs already within the occupied territories.

186. These offensive operations will be initially on a very limited scale, but as the strength of our forces develops, we must aim at occupying outlying areas within striking distance of those occupied by the enemy, the possession of which will facilitate the actions of the other Services, tighten the blockade and, wherever
appropriate, encourage the inhabitants to oppose the enemy. Such areas should
be chosen so as to enable the enemy to be engaged where he is not able to deploy
his full strength. This phase may include direct attack on Italy, if it appears
that this can be profitably undertaken, or may entail the landing of a force on the
Iberian Peninsula.

187. The successful development of these operations will entail, to an ever-
increasing degree, the restoration and maintenance of order in enemy and
ex-enemy-occupied territory, possibly including metropolitan Italy.

In the final phase, when enemy resistance is disintegrating as the result of
blockade and air action, we must be capable of entering Germany itself, imposing
our will on the enemy and replacing German control by British control throughout
large areas of Europe. Unless we can do this we are unlikely to be able to impose
the terms of peace to which we aspire.

188. The precise nature of the operations which will result in this end
cannot be indicated in advance; nevertheless, the final overthrow of the German
armies, however weakened, may require the employment of a considerable force,
which will have to contain a large proportion of armoured formations and be
adequately provided with landing craft. An essential to the success of these
operations will be a high degree of air superiority.

Elimination of Italy.

189. Owing to the uncertain state of the morale of the Italian people, and
the lower fighting value of their forces, Italy is the soft spot in the enemy’s front
and it will be an objective of our offensive policy to increase the pressure on
Germany through the elimination of Italy.

190. In the first place, Italy’s power and will to resist are less robust than
those of Germany, and a deterioration in Italian armed forces would constitute
an immediate diversion for Germany, who would be bound to come to Italy’s
assistance. This in turn would create additional weakness in the enemy system
arising from the innate Italian dislike for Germans.

191. The collapse of Italy would yield great strategic advantages. Firstly,
big would be a severe blow to Germany and correspondingly improve our prestige in
all other countries. It would remove the threat to Egypt and the Red Sea and
release land and air forces from this commitment. It would release naval forces
from the Mediterranean for the strengthening of the naval blockade or for the
reinforcement of the Far East. The Mediterranean route would reopen to our
trade, Germany would be cut off from North African supplies and we should be
in a strong position to tighten up the blockade by interrupting coastal traffic and
by cutting off all trade reaching Germany by sea through the Dardanelles. The
psychological effect on the Balkan countries would be immense. Turkey, in
particular, whose attitude would be a most important factor to the security of our
position in Palestine and Iraq, would be strengthened in her determination to
resist and might even come in on our side.

192. Our means of bringing about the collapse of Italy by directly
threatening Metropolitan Italy, must at first be confined to air attack. We have
evidence to confirm that a resumption of air attacks on objectives in Northern
Italy may have profound repercussions on Italian morale. A proportion of our
bomber effort operating from the United Kingdom is already being directed on
to those objectives, and the pressure should be maintained.

193. While amphibious operations directed against Metropolitan Italy are
likely to be impracticable in the initial phase, we might inflict considerable damage
to Italian morale by attacking him where he is at his weakest, namely, in
East Africa. The Italian forces in this area are cut off from their sources of
supply and are a wasting asset. Local successes, but even more so decisive
operations, would have an immediate effect throughout Africa, Egypt, Turkey and
the Middle East generally. They would, moreover, secure our communications
through the Red Sea.

It would therefore be to our advantage to assume an early offensive against
Italian East Africa, and by so doing we should retrieve the loss of prestige
we have suffered in this area, and encourage the prospects of large-scale revolution
in Abyssinia.
194. In the Mediterranean we should undermine Italian resistance by continued offensive operations with our naval forces. This in time may provide the opportunity for amphibious operations within the Mediterranean and the securing of bases, such as the Dodecanese, from which we could operate against Italian communications in the Ægean and remove the threat to our own, or in Tunisia, whence we could threaten Southern Italy and communications with Libya. We should therefore begin as soon as possible preliminary attacks by aircraft to pave the way for operations against these Islands which might subsequently be successfully seized without very great effort.

Subversive Activities.

195. The review of the state of readiness and ability of the enemy peoples and subject populations to rise in revolt, contained in paragraphs 51 to 57 has indicated that with the exception of Poland and Czecho-Slovakia none of these countries is likely, from its own resources, to initiate risings on an effective scale. Nevertheless, the stimulation of the subversive tendencies already latent in most countries is likely to prove a valuable contributory factor towards the defeat of Germany. By such means the enemy will be compelled to increase his armies of occupation and to make inroads into the resources required for offensive operations elsewhere. A general uprising, coinciding with major operations by our forces, may finally assist to bring about his defeat.

196. Subversive operations must be regarded as a strictly supplementary course of action, and must conform with regular operations undertaken as a part of our main strategic plans.  

197. The objectives of subversive operations will be as follows:—  

(a) Sabotage of key plants, commodities and communications, to supplement the effects of the blockade and air attack.  

(b) The containing and extending of as many of the enemy’s forces as possible, thus forcing him to expend his military resources.  

c) The preparation of the requisite conditions for a general rising of subject populations to synchronize with the final military pressure we exert on Germany and Italy or to coincide with land operations in any particular theatre.

198. Successful results will require careful planning and detailed organisation. If successful revolts are to be organised in German-occupied territories the following conditions must be fulfilled:—  

(a) Adequate preparations to provide the necessary material and physical assistance and support for the revolts. The provision of this support must be clear beyond all doubt.  

(b) A carefully prepared scheme of propaganda.  

(c) A clear policy as to the economic and political future of Europe.

199. It will be important to ensure that subversive movements should not be allowed to break out spontaneously in areas that individually become ripe for revolt. No appreciable results can be expected in the early future and we should organise these activities on a large scale so that they are timed to mature in relation to regular operations undertaken as a part of our general policy. In the interim we should endeavour to obtain the assistance of individuals and small factions to carry out sabotage and to co-operate with our harassing action on the enemy coasts.

Propaganda.

200. Propaganda in enemy countries, in territories occupied by the enemy, and in neutral States, can be employed to sway public opinion in the direction required to assist our policy and to hinder that of our enemies. Furthermore, counter-propaganda will reduce the effect of enemy propaganda, and, if properly applied, will render it innocuous. In our methods of defeating Germany, propaganda intelligently directed on a consistent policy, will therefore play an important rôle.
201. The theme of our propaganda will require to be appropriate to the conditions in particular areas and to the situations prevailing at the time. An essential basis of propaganda is, however, military success, and any successful action should be immediately and truthfully exploited. Two particular points require emphasis in connection with our policy of economic blockade. The first is the importance of preventing the Germans from exploiting the effects of the blockade to our disadvantage; the second is the desirability of increasing the fear among the peasants of food shortages so as to encourage hoarding, and thus increase the difficulties of distribution and the shortages in the industrial areas.

Military Requirements of our Diplomacy.

202. We have shown above the offensive and defensive strategy that we must pursue in order to defeat Germany. To this strategy our political strategy must necessarily be related. The French Government, under German direction, has shown considerable hostility. An ordered and subservient France, obedient to the orders of Germany, can only act to our disadvantage. Our efforts should be directed to severing the connections binding the units of the French Colonial Empire to France, thus freeing them from the influence of a German-controlled French Government and so securing their continued co-operation in the conduct of the war. We should support any elements that are willing to make a stand against German and Italian domination, but for the present our aim should be to maintain the stability of any Government not actively hostile to us, particularly in West Africa, where an upheaval might endanger our interests, while we ourselves are so weak in that area. Ultimately, our aim should be to establish a new French Government in Africa, free from direct German influence and pledged to the Allied cause.

203. With regard to Spain and Portugal our policy must be to prevent our enemies making use of them as a lung through which to draw significant quantities of essential supplies. Nevertheless, it is so important that they should not be forced to join our enemies that we should be prepared in the last resort to make certain relaxations in the economic blockade, as suggested in paragraph 173.

204. In the Balkans we are powerless at present to direct policy. We must, however, take any opportunity to foster trouble wherever we can with a view to disturbing the even flow of raw materials to Germany and possibly causing a clash of interest between Russia and Germany or Italy, provided this does not lead to a conflict between Russia and Turkey.

205. As in the Balkans, so in any other area where German and Russian interests run counter to each other, it is to our advantage to bring Germany and Russia into conflict. In our dealings with Russia, however, our policy must be directed to fostering such friendship as is possible between her and Turkey and limiting Russian expansion southward into Iran, where she would threaten our interests in the Middle East and our essential oil supplies. We have already pointed out in connection with the defence of India the importance of avoiding war with Russia.

206. Our policy with regard to Turkey must be to improve her relations with Russia and so avoid the possibility of Turkey seeking from Germany the help to withstand Russian aggression that we at present are unable to give her.

207. Our policy with regard to Japan should remain one of avoiding war. In the Far East we should, therefore, play for time, cede nothing until we must and, if possible, secure a general and far reaching settlement by which peace with Japan may be assured, thus allowing our whole military effort to be directed to the defeat of Germany and Italy.

208. In the American Continent it seems likely that all the States will follow the lead of the United States. Already in the United States the Government and a great proportion of the people are ready to offer a large measure of economic and material support to us. Our policy should continue to be directed towards obtaining the full financial and economic co-operation of both North and South America, which is of the utmost importance to our general strategy. The value to us of a full military alliance with the United States needs no emphasis.
209. At home, we are handicapped in our security measures by the unsatisfactory attitude of Eire. Nothing short of full alliance against Germany could fully meet our requirements and this must necessarily be our political aim. Failing such alliance it is clear that we should pursue a policy devoted to bringing the United Kingdom and Eire closer together, so that military arrangements may be made for the mutual security of the two countries.

Conclusions on the Strategy we should adopt in order to defeat Germany.

210. Although in two important respects, namely, in economic pressure and in the air, we are already engaged in a relentless offensive, we are still in the phase, in certain theatres and in certain spheres, when our strategy must be primarily defensive and our energies devoted to building up our strength. Apart from the United Kingdom, the security of which must be our primary consideration, there are certain important areas which are by no means secure, particularly the Middle East which is directly threatened, Malaya and West Africa. Reinforcements for these areas must be provided as early as possible. In particular the security of our position in the Middle East is of the utmost importance to our strategy, not only as a base from which to exercise and intensify economic pressure, but as a barrier to prevent our enemies from breaking the blockade. The reinforcement of the Middle East is thus clearly a matter of the greatest urgency, particularly in view of the long sea passage involved for reinforcements and equipment coming from the United Kingdom. In addition, certain areas are subject to a longer-term threat, e.g., Iraq and Palestine. For these areas reserves must be made available in the Middle East and India as soon as circumstances permit.

The necessity for making provision for our security overseas thus postpones the time when we can hope to undertake major offensive operations.

211. The wearing down of Germany by ever-increasing force of economic pressure should be the foundation of our strategy. We must achieve it by the tightening of our economic blockade to deprive Germany of the essential raw materials and food stuffs necessary for war and for the maintenance of morale and discipline within Germany and her armed forces. Simultaneously, we must extend our air attacks on Germany, and those attacks must be directed mainly on targets that will assist our economic pressure, such as oil supplies and communications and industry. These attacks, apart from their military effect, may also undermine the morale of the fighting forces and that of the country as a whole, and the fullest use should be made of subversive activities and propaganda in their support.

While we continue to build up our resources, it will be important that we should develop as quickly as possible the scale of these attacks, and, within the limits of our resources, undertake amphibious operations against the enemy’s coast line to harass him and lower his morale.

212. As our forces expand, our policy must be directed to making full use of sea power to enable us to strike with land forces at outlying enemy positions. Such attacks though limited in extent should stretch out the enemy defences, use up his resources, tax his communication systems and put in our hands positions from which we can tighten our blockade and areas in which we can raise revolt against enemy occupation or support neutrals in their action to deny their resources to the enemy. With the further expansion of our forces and weakening of those of the enemy, operations with these objects can be conducted on a larger scale and should also be directed to detaching from Germany those countries that she now occupies.

213. The elimination of Italy and the consequent removal of the threat to our control of the Eastern Mediterranean would be a strategic success of the first importance. Italy’s power of resistance is much less than that of Germany and direct attack on Italy and her possessions in Africa may be the first important step we can take towards the downfall of Germany. It will therefore be of great importance to turn the offensive against Italy as soon as our resources permit.

214. It is not our policy to attempt to raise, and land on the continent, an army comparable in size to that of Germany. We should aim nevertheless, as
soon as the action of the blockade and air offensive have secured conditions when numerically inferior forces can be employed with good chance of success, to re-establish a striking force on the Continent with which we can enter Germany and impose our terms.

Timing of our ultimate offensive.

213. One most important conclusion emerges from the consideration set out in this appreciation. The severe effects of another winter of blockade on the internal economy and morale of Germany and her conquered territories, the cumulative effect of air attacks, and possible disastrous failure of attacks on this country, may take a heavy toll of the German will to continue the struggle. Nevertheless, we cannot rely on an internal breakdown from these causes in 1941, though we should do all we can to hasten it by intensifying such offensive and harassing action as can be taken with the forces at our disposal. Although Germany's oil position may be precarious by the middle of next summer and by the end of the year may be disastrous, we cannot count on this factor doing more than seriously restricting her strategical flexibility by the end of 1941. This would not prevent Germany from maintaining her greatly superior numerical strength in land and air forces and, although we may hope to bring about the defeat of Italy if circumstances are favourable to us, we see no prospect of undertaking land operations on a major scale against the German army next year.

216. Our programme of air expansion cannot come to fruition until 1942 and, in order to achieve the strength at which we aim, our first-line expansion during 1941 must be limited. If we try to expand too quickly in the next twelve months we cannot hope, at the same time, to build up our air-power to a decisive strength in 1942. The same considerations apply to a lesser extent to the Army, whose programme cannot be expected to be complete until 1942. At the same time, we must bear in mind that in the absence of decisive successes against the German and Italian fleets in the intervening period, our relative naval position will deteriorate in 1943 and our Merchant Shipping position may become increasingly serious. If therefore we attempt, without success, to achieve a decision in 1941 we shall have mortgaged our capacity to build up forces of decisive strength by 1942, and may well be unable to gain a decision before our position at sea undergoes a serious deterioration.

217. It is, however, quite impossible to forecast with certainty the rate of decline of German strength and morale; many economic and political factors, at present hidden from us, may affect events. It must obviously be greatly to our advantage to achieve victory as early as possible; we must therefore always be ready to take advantage of a favourable situation, and to seize really profitable opportunities as they arise, while avoiding commitments beyond our strength in the unjustified expectation of a short cut to victory.

218. The general conclusion therefore is that our strategy during 1941 must be one of attrition. We must secure our positions in overseas theatres of war and retrieve any that may have been lost owing to our temporary weakness. We must intensify the economic blockade, sustain the air offensive and generally wear down the enemy's resistance with the aid of minor amphibious operations and other activities described in the foregoing paragraphs. During the period, in which we are building up our resources, circumstances may change in such a manner as to justify our diverting forces from action against Germany in order to eliminate Italy. If this should be possible, we should undertake decisive action against Italy beginning by air action against Italy herself and invasion of her African Colonies. Throughout 1941 we must accelerate to the utmost the building up of our resources. But the general aim which should govern our strategy and determine the scope and rate of development of our expansion programmes should be to pass to the general offensive in all spheres and in all theatres with the utmost possible strength in the Spring of 1942.

219.—The entry of America into the war on our side would have a profound effect. We should be justified in taking greater risks and accepting heavier losses in seizing any favourable opportunities that may arise for offensive action in 1941.
Nevertheless we do not consider that it would be safe to assume that the accretion to Allied strength on land and in the air by the spring of 1942 would be such as to justify us endeavouring to accelerate our own expansion in 1941 at the serious expense of our strength in 1942.

PART IV.—REQUIREMENTS OF THE FIGHTING SERVICES.

220. We now turn to review the strength of the forces which we estimate we shall require in order to implement the offensive and defensive strategy outlined above. In assessing these requirements it would clearly have been unprofitable to have set out the ideal without any regard to practicable possibilities. We have therefore attempted to set out a balanced programme in which our strategic requirements are related to the manpower and productive capacity which is likely to be at our disposal, in so far as we have been able to assess them.

Naval Requirements.

221. In view of the length of time needed for building warships, particularly capital ships, our naval requirements must look further ahead than those of the other two Services. For the latter our estimates reach to 1942, but for the Navy they must go considerably beyond that date, even though we hope to have defeated Germany in the meanwhile.

222. Proposals for a Naval Construction Programme for 1940 and subsequent years were formulated in December 1939, after a full consideration of the then existing political and strategical situation. These proposals were cut very considerably so as to allow capacity for the requirements of the other Services and for merchant ship building. The programme as finally approved was regarded as the very minimum for safety.

223. In May 1940, in order to accelerate the building of small craft and also to enable army equipment to be produced more quickly, work on 6 Capital ships, 1 Aircraft Carrier, 8 Cruisers, 8 Destroyers and 10 Sloops was suspended (or not started). Owing to the requirements of merchant ship building, the following further ships, which had been proposed, were omitted from the 1940 programme—2 Aircraft Carriers, 10 Cruisers and 20 Destroyers, thus bringing the total number of ships suspended, or not started, to:

- 6 Capital Ships.
- 3 Aircraft Carriers.
- 18 Cruisers.
- 28 Destroyers.
- 10 Sloops.

224. The naval strategical situation has altered recently in the following main respects—

(a) We are faced by the Italian Fleet as well as the German. The Italian battlefleet now consists of 4 modernised capital ships and will shortly be augmented by the new 35,000-ton 15-inch ships *Littorio* and *Vittorio Veneto*, which are already in commission.

(b) With the collapse of France, we no longer have the French Fleet to offset the Italians in the Mediterranean. Although a proportion of the French Fleet is immobilised, damaged, or in our hands, a considerable number of ships is not under our control and the possibility that these ships may be used to augment the enemy’s forces cannot be ruled out.

(c) The enemy now has at his disposal bases between the north of Norway and the Spanish frontier, and in the Mediterranean. We already are faced with the necessity of maintaining more than one strong fleet.

(d) From such bases the enemy is in a favourable position to increase his submarine attack on our trade or to pass a sea-borne invading force to our shores by night. To combat this danger light craft are our chief requirement.
At the same time the bases available to us are reduced; French ports are denied to us, and Gibraltar may become unusable, or its facilities impaired by air attack. This loss of bases necessitates an increase in total strength in order to maintain adequate forces in those strategic areas where no friendly base is now available.

With the acquisition of the industrial areas of France and Lorraine and of the shipbuilding facilities in occupied France, the enemy has at his disposal additional sources of supply of material and ships. Further, the acquisition of aerodromes for shore-based aircraft in an area reaching from Northern Norway to the Spanish frontier gives him wide facilities for air reconnaissance and air attack on our trade, which will necessitate a considerable increase in our trade protection forces.

With our present European commitments, we are not able to send a fleet to the Far East strong enough to act as a deterrent to aggression by Japan. The present attitude of Japan indicates that it is essential that we should finish this war with a fleet sufficiently strong to secure, and if necessary re-establish, our interests in the Far East at the end of the war.

In this connection, while there was a considerable element of doubt as regards Japanese building programmes when proposals for our 1940 Naval construction programme were prepared in December 1939, confirmation of the high rate of Japanese building has now been received.

Capital Ships.

225. From examination of British and foreign capital ship programmes the following estimates can be made, on the assumption that building by other Powers continues while our programme is suspended:

(i) By the end of 1942 Germany and Italy combined may have 15 heavy ships mounting guns 11-inch or above against our 18. This figure of 18 includes 4 old, slow and badly protected Royal Sovereign Class, and the Barham, Malaya and Repulse, who have not been fully modernised. The Italo-German navies may have 7 new fast 35,000-ton capital ships as against our 4. The Scharnhorst and Gneisenau are modern ships, and the 4 reconstructed Cavours are faster than our modernised battleships.

(ii) In 1943 the situation will have further deteriorated and the Italo-German strength in new 35,000-ton ships may be double our own, 8 to 4. (This assumes no interruption or delay to enemy building. With unrestricted access to the iron and coal resources of industrial France and of bauxite from Jugo-Slavia, there is no reason to expect such interruption from difficulties with raw materials.)

(iii) Even if the Italo-German main fleets can be disposed of without losses to our own capital ships, we shall be faced in 1942 by a Japanese Fleet equal to our own in number of heavy ships and comprising new 35,000-ton or larger ships equal to our own in numbers. Furthermore, Japan's modernised ships are superior to our older ships, and our ships will be feeling the strain and damage of the wear-and-tear of war. Four new fast heavy armoured cruisers with 12-inch guns will have been added to the Japanese Fleet—one of these ships would require a 35,000-ton battleship or the Hood or Renown to deal with it.

(iv) In 1943 the position vis-à-vis Japan will have deteriorated by their addition of a further capital ship and another heavy armoured cruiser.

(v) Even if it is accepted that the United States Fleet can be expected to neutralise the Japanese Fleet it must be borne in mind that the Japanese Fleet is concentrated in its own probable area of operations, whereas the United States Fleet may be required both sides of the American continent. The comparison between our fleet and the Italo-German fleet in (i) and (ii) above takes no account of the possibility of French capital ships being used against us. It is not considered that this possibility can be dismissed.
226. If work is now continued on the suspended capital ships, the situation will be improved by the addition of another battleship (Howe) to our fleet in the middle of 1942. Thereafter we shall not further improve our position until 1944, but in that year one battleship and one battle-cruiser should come into service; and two more battleships would complete in 1945 and one more in 1946.

**Aircraft Carriers.**

227. Our requirements of aircraft carriers in a dual war with Germany and Japan have been estimated in the past as 14 (4 at home, 4 in the Far East, 5 on the Trade Routes and 1 for training). With the present suspension we shall reach a total of 9 (including Argus) in 1941, which will be increased to 10 with the completion of Implacable, whose date is uncertain.

228. Under present conditions, without taking into account a fleet in Eastern waters engaged with Japan, our requirements in aircraft carriers are estimated to be as follows:

<table>
<thead>
<tr>
<th>Route</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade Routes</td>
<td>5</td>
</tr>
<tr>
<td>Eastern Mediterranean Fleet</td>
<td>2</td>
</tr>
<tr>
<td>Western Mediterranean Fleet</td>
<td>2</td>
</tr>
<tr>
<td>Northern waters</td>
<td>2</td>
</tr>
<tr>
<td>Training</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

In the above we have not made provision for aircraft carriers which may be required in connection with combined operations which may take place outside the fighter cover from shore aerodromes in the United Kingdom or elsewhere.

229. The reasons for these requirements are as follows:

(a) **Trade Routes.**

Our trade as a whole is now more vulnerable due to the following causes:

(i) There is an increase in potential enemy raider strength due to the addition of Italian, and possibly, French vessels.

(ii) Raiders from Atlantic and Mediterranean ports may have to be intercepted as well as on the Northern Patrol.

(iii) Raiders may use French possessions as bases.

(iv) We have to use the Cape route instead of the hitherto safe route through the Mediterranean.

(b) **Mediterranean Fleet.**

With the loss of a friendly North African Coast, fighter protection for the fleets in the Mediterranean has become essential. The protection afforded to a fleet by even a few fighters has been clearly shown by recent operations in the Mediterranean. It has been equally evident from these operations that reliance must be placed on T.S.R. aircraft of the Fleet to fix the enemy’s capital ships so that they may be brought to action by our own slower capital ships.

Under conditions now prevailing in the Mediterranean where the fleet is exposed to air attacks for long periods one carrier cannot carry sufficient fighters and T.S.R. aircraft. Two carriers are considered necessary both with the Western and with the Eastern Mediterranean fleets if offensive operations are to be carried well into enemy waters. These carriers should, if possible, have armoured flying decks.

(c) **Northern Waters.**

In the North Sea air attack can be carried out against enemy ships by shore-based aircraft. It is evident, however, that reliance cannot be placed on shore-based fighters for the protection of a squadron operating in the North Sea far from our own coast. There is therefore a definite requirement for an armoured carrier carrying fighters and this is of particular importance should the Fleet be required to operate to the southward. The carrier intended for this duty must be in addition to the carrier providing air
reconnaissance and striking forces for the Fleet in northern waters outside shore-based range since otherwise a delay would occur in exchanging fighters for T.S Rs. This delay would be unacceptable in an emergency.

(d) Amphibious Operations.

The possibility of amphibious operations taking place outside the range of any fighter cover that can be provided from shore aerodromes also points to the need for armoured aircraft carriers operating fighters.

... (continued with further details)
Landing Craft.

235. Our offensive strategy shows the necessity of landing forces in enemy territory, for which purpose landing craft in large numbers and ships equipped to carry them will be necessary. The construction and equipment of these is an important part of our building programme and must be placed high in the order of priority.

Conclusions on Naval Requirements.

236. The conclusions drawn with regard to our naval construction programme are:

(a) The original balance in our programme between types of ships should be restored. Immediate bias has been given towards light craft, to meet the danger of invasion and for A/S protection to trade, but we cannot afford to go too far in this direction.

(b) It is most desirable to resume the suspended Naval Construction programme as soon as possible, and in view of the changed character of the war, naval construction should, as far as possible, take priority over other requirements except those of the Air Ministry and Mercantile Shipbuilding.

The effects on our present naval programme and on those of other Services of a resumption of this suspended Naval Construction programme will require detailed examination, before a decision can be made.

Merchant Shipping.

237. The construction of merchant shipping must be related to the programmes of the three Services and must be given the priority needed for maintaining our essential imports.

238. In view of the requirements for the offensive operations outlined in paragraphs 185 to 187, our merchant shipbuilding programme must include any special ships required for these operations. The requirements which can be foreseen at present are:

(a) Ships for carrying A.F.Vs., guns and M.T. which are of suitable size and draught for using small harbours.

(b) Aircraft transport ships.

Army Requirements.

Security of the United Kingdom.

239. The forces at present in the United Kingdom amount to the equivalent of 28 divisions and 10 unallotted brigades, in various stages of equipment and training. It is not yet possible to make any firm forecast of the minimum permanent requirements of home defence. Eventually, as the measures outlined in paragraph 139 become effective, and as the threat of invasion recedes, so it should be possible to release for employment elsewhere divisions of the field army employed on home defence.

Security of Overseas Possessions.

240. In Appendix VI are shown the minimum garrisons at present considered necessary for the defence of our overseas garrisons (excluding the defence of the Dominions and India), the strengths of the existing garrisons, and the interim reinforcements proposed during the autumn and the winter of 1940-41.

241. The minimum garrisons considered necessary amount to the equivalent of 15 divisions, excluding internal security troops. In addition, provision should be made for a reserve of three divisions in the Middle East. In the event of Russian aggression or a serious internal security situation arising in Iraq or Iran, a further force of three divisions would be required in that area.
The total required for the security of our possessions overseas (excluding the Dominions, India and minor garrisons) may therefore amount to the equivalent of 21 divisions, excluding internal security troops.

Immediate measures proposed.

242. The existing total strength of our garrisons abroad amounts to the equivalent of 8 divisions; but these formations are in many cases seriously deficient in equipment. The garrison in the Middle East is at present particularly weak, and a combined German and Italian attack this autumn is a probability. The completion of the equipment and reinforcement of this garrison is, therefore, a matter of the greatest urgency. It is proposed to make available for this theatre reinforcements amounting to the equivalent of four divisions during the coming autumn, in addition to the equivalent of one African Division being raised locally.

243. The garrison of Malaya has at present only one of the three divisions considered necessary for security. In view of the attitude of Japan, it is proposed to make a further two divisions available during the coming winter.

244. In view of the threat to Freetown, a British brigade is being despatched in October to tide over the period before the local Colonial forces can be expanded to undertake the commitment.

In all, arrangements are being made to provide during the autumn and winter of 1940-41 the equivalent of 8 divisions as reinforcements, thus completing the requirements of minimum security. In the event of it being decided to form the reserve in the Middle East, and in the event of Russian aggression in Iraq or Iran, a further 5 divisions would have to be made available at a later date.

The equipment factor.

245. The present Army equipment programme aims at producing equipment as soon after June 1941 as possible and not later than the Spring of 1942 for a total of:

- 5 Armoured divisions;
- 10 Army Tank Brigades;
- 50 Infantry divisions;

supplemented by the replacement of net losses in the field and the special requirements of home defence.

246. How successfully this programme can be realised depends on a number of factors whose influence is difficult or impossible to assess. It seems certain, however, that during the next 16 months the existing equipment programme cannot be materially exceeded, and indeed may not be attained.

247. As we have pointed out in paragraph 99, an important factor is the wastage that must be anticipated during the period while the field army is being built up. We suggest that the present figure of 300 division/months should be re-examined on the following basis:

Between now and June 1941 (i.e., to Z + 21) there may be an attempted invasion of the United Kingdom which will involve intensive operations for a month. In the Middle East the equivalent of six divisions may be actively engaged between September 1940 and May 1941, and the equivalent of a further five divisions (reinforcements) for one month less. An allowance of some 10 division/months might be made for operations in Iceland, West Africa and elsewhere.

Between June 1941 and December 1941 (i.e., Z + 21 to Z + 27) no further allowance need be made on account of invasion, but there may be active operations in the Middle East involving the equivalent of fourteen divisions.

The Man-Power Factor.

248. We have shown in paragraph 105 above that the supply of man-power alone in the Empire will not be a limiting factor in our existing programme unless there is a large increase in A.A. troops, and that an expansion of our forces, and the foreign forces formed under our aegis, would be possible in the future, provided we were in a position to supply the necessary equipment.
249. In view of the great numerical superiority of the German and Italian forces, the many different theatres in which our forces may have to operate and the very large areas in Europe which they may ultimately have to control, it is not possible at present to estimate the size of the army we may eventually need. All that can be said now is that the land forces available are likely always to be weaker than we should desire.

Conclusions on Army requirements.

250. Of the 55 divisions which should be available from the Empire in the Spring of 1942, the equivalent of 21 may be required for the security of our overseas possessions (other than the Dominions and India and apart from internal security troops). This leaves 34 divisions available for the requirements both of the home field force and for offensive operations overseas. The strength of the home field force will vary in accordance with the imminence of the threat of invasion, but it appears probable that a force of the order of from 20 to 30 divisions will be available for offensive operations overseas by the Spring of 1942. It is possible that the existing equipment programme will permit of some further expansion after the Spring of 1942, but this cannot at present be defined, and by that time we may see distinct advantages in supplying equipment on an appreciable scale to potential allies.

Air Force Requirements.

Metropolitan Bomber Force.

252. We have argued that a factor of primary importance in our capacity to defeat Germany is the expansion of the Metropolitan Bomber Force to enable the air offensive against Germany and Italy to be extended and intensified. The rapid development of this force is an essential part of our strategy, since it is necessary to produce within reasonable time the deterioration in the enemy's resistance which must be the preliminary to any culminating offensive aimed at the final defeat of Germany. The bomber force should consist of a high proportion of heavy bombers for the long range offensive into Germany by night, and, in suitable conditions, by day.

253. The first line establishment of our Metropolitan Bomber Force is at present is of the order of 600 aircraft of moderate performance and striking power, as compared to the present German first line bomber establishment of over 3,000 aircraft. The old aim of parity with Germany is, however, in present conditions neither a practical nor even necessarily a desirable policy. In any event, it is open to the objection that, as pointed out in paragraph 72, we have no means of knowing what the strength of the German air force will be at any future date. We should aim, therefore, at a striking force based on a reasonable assessment of our intrinsic requirements. And a governing factor must be the essential need for quality, which is bound to suffer if we overdo quantity, and which applies not only to the performance, armament and striking power of the aircraft but even more to the morale, fighting value and standard of training of crews.

254. We consider that a heavy bomber force of 1,600 first line aircraft, including as high a proportion as possible of the new types with greatly increased range and striking capacity, adequately supported by a high rate of production of aircraft and of crews trained to our present standards, would enable us to sustain an air offensive on the lines described in paragraphs 178 to 183, with the most devastating results. In endorsing, therefore, the Air Ministry's target programme...
set out in paragraph 271 below, we would urge that all possible steps should be
taken to ensure that it is completed as early as possible in 1942, accepting the
condition that to do so will inevitably involve a severe limitation to our strength
throughout 1941.

255. It is essential that we should maintain in the Metropolitan Bomber
Force an adequate proportion of the lighter class of bomber for day operations
and for the support of the Army. A high proportion of the medium bombers
in the table in paragraph 271 below will consist of types suitable for the latter
role, mostly from American production.

**Fighter Defence of the United Kingdom.**

256. One of the first considerations in our defensive strategy has been to
secure the main base of our war effort in the United Kingdom, particularly
shipping, ports and industry, against a heavy scale of air attack which has
threatened it and will continue to threaten it during the coming months. Our
task has been to raise the fighter force to a reasonable scale, and the first line
strength of our fighter defence at home will rise from approximately 1,500
aircraft in August 1940 to a total of some 1,500 aircraft during 1941.

Any further extension of our fighter forces beyond that total would not be
an economical expenditure of our war effort, and it is necessary that emphasis
should now be on the development of our offensive power. We must, however,
provide for fighter defence overseas, and allowance must be made for the
provision of a first line strength overseas of approximately 370 aircraft.

**A.A. Requirements.**

257. The present authorised scale of requirements of both heavy and light
A.A. guns is 8,662* at home and overseas. An increase in this scale is now
under consideration,† which will probably involve an extension of the age group
to 18 to 50.

It is proposed to introduce the U.P. weapon in quantity at an early date
mainly in order to tide over the present large deficiencies in heavy and light
A.A. guns.

**Middle East.**

258. It is necessary, on a high order of priority, to remedy the serious
weakness in our bomber and fighter force in the Middle East, which, with their
existing strength and equipment, are inadequate to meet the combined German
and Italian threat to Egypt which may shortly materialise. In particular, it is
of considerable importance in our defensive strategy to possess the capacity for
the effective attack of the principal Italian base in Libya, Benghazi, and to
secure the fleet base at Alexandria. Both modern bombers and fighters are
required for these tasks, and the first step in providing security is to re-equip
two heavy and five medium bomber squadrons and three fighter squadrons
with modern aircraft. A more rapid improvement in operational efficiency in
this area will, in fact, be attained by this method than by despatching
existing squadrons from the United Kingdom, whose ground personnel and stores
would be immobilised on passage and not available at either end during the next
critical two months. It is hoped to complete the re-equipment of the above units
by the end of October 1940. At the same time it is important to develop in the
Middle East capacity to operate a number of reinforcing squadrons for certain
periods, either to resist a particularly severe attack or to stage an offensive
operation. For this purpose facilities for operating twelve reinforcing squadrons
are required and should be provided as soon as possible.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Heavy</th>
<th>Light</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.D.G.B.</td>
<td>2,292</td>
<td>1,900</td>
</tr>
<tr>
<td>Field Force (36 divisions)</td>
<td>1,056</td>
<td>1,632</td>
</tr>
<tr>
<td>Middle East</td>
<td>644</td>
<td>48</td>
</tr>
<tr>
<td>Ports Abroad</td>
<td>926</td>
<td>132</td>
</tr>
<tr>
<td>Training</td>
<td>104</td>
<td>78</td>
</tr>
<tr>
<td>Customers</td>
<td>710</td>
<td>390</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4,494</td>
<td>4,168</td>
</tr>
</tbody>
</table>

* A.D.G.B. 2,232 1,860
Field Force (36 divisions) 1,056 1,632
Middle East 644 48
Ports Abroad 926 132
Training 104 78
Customers 710 390

† C.O.S. (40) 698.
259. Apart from certain heavy bomber aircraft which can fly direct to
Egypt from the United Kingdom, re-equipment and reinforcement can, owing
to the collapse of France and the denial to us of facilities in Southern France and
North Africa, only be carried out along the following routes:—

(a) By air, using Malta as a staging point.
(b) By ship to Takoradi in Nigeria and thence by air to Khartum.
(c) By ship to the Cape and thence by air to Egypt.
(d) By ship via the Cape to Suez.

260. Of these schemes the first depends upon our being able to continue to
use Malta in the face of a probably increasing scale of air attack. The organisa-
tion via Takoradi is designed to handle eventually up to 120 aircraft a month,
but if the threat from French Equatorial Africa materialises it may be difficult
to maintain. Both the above routes are now organised. The one via the Cape
should be developed in consultation with the Government of South Africa.

Far East.

261. Our defence policy in the Far East,* in the absence of an adequate
fleet, must rely primarily on air power. The existing total air strength is only
88 aircraft (including three Australian Squadrons). The minimum requirements
for the security of Malaya, Borneo and co-operation with the Navy in the control
of sea communications in this area is a total of 336 first line aircraft.

262. The immediate aim must be to provide two fighter, two general
reconnaissance squadrons and the re-equipment of the obsolete aircraft in the
British Squadrons with modern types by the end of 1940. Our capacity to do so
will depend on the course of operations in Europe and the Middle East.

India.

263. The air forces in India have been seriously depleted since the outbreak
of war. There are a total of seven squadrons (78 aircraft) at present in India
mostly of obsolete aircraft, including one Indian Squadron. There are no fighter
squadrons and India is in no position to deal with the contingency of Russian
hostility.

264. Making allowance for the recommendations of the Chatfield Committee,
and the additional threats which have since materialised, our long term
programme for the increase of India’s air strength should provide for a force
of 144 bomber aircraft (including 1 squadron of Bomber transport aircraft) and
128 fighters in addition to the existing army co-operation aircraft and the aircraft
of the Indian squadrons. A high proportion of the aircraft in the programme
for India can be regarded as a reserve for the Middle or Far East.

A certain measure of re-equipment has already been arranged for, but the
provision of fighters or even the re-equipment of bomber squadrons is not
practicable in present conditions.

General reconnaissance.

265. It is of urgent importance to increase our strength in this type to meet
the considerable additional commitments which are incurred in the existing
situation. Our present essential requirement in first line general reconnaissance
landplane and flying boat squadrons at home and overseas is a total of 727 aircraft,
the present first line strength is 366 aircraft.

Army Co-operation.

266. The precise requirements of the long-term army co-operation
programme will have to be determined in accordance with the size of field force
which we may be able to raise for operations on the Continent. A token figure
has been taken, as a basis for production planning, of 576 first-line aircraft at
home and overseas.

Strategic Mobility and Air Transport.

267. To implement our defensive and offensive strategy, it is important to
give full consideration to the requirements of strategic mobility and air transport.
In the first place we may require rapidly to reinforce our air force garrisons

abroad from the United Kingdom. Secondly, it may be necessary to provide small parachute and air landing forces in conjunction with the type of combined operations by land and sea forces which have been referred to in previous paragraphs. The provision of special types for this purpose is uneconomical, and the carriage of air borne or parachute troops must be an alternative role for heavy bomber squadrons.

**Mobile Air Base.**

268. In order to assist in amphibious operations or the rapid reinforcement of our overseas garrisons, a small ship-borne air base organisation, including both anti-aircraft defences and servicing facilities, would be of the greatest value and should be prepared in the near future.

**Dominion Programmes and Miscellaneous Requirements.**

269. In assessing our production programme it is necessary to consider the air force requirements of the Empire as a whole, since the Dominions' air forces are largely dependent on our production and the arrangements we are negotiating for United States production. These requirements, which are approximate totals only, amount to 144 fighters, 240 bombers, 292 General Reconnaissance and 60 army co-operation aircraft. In many cases the Dominion squadrons will represent a valuable addition to our forces in overseas theatres.

**Target Programme.**

270. The following table shows the suggested target programme for the air forces of the Empire. This programme is based on the production programme in the United Kingdom, supplemented to a considerable extent by the productive potential of the United States. It comprises a number of requirements that have already been assessed in previous appreciations, such as those for overseas Commands and for trade protection, in addition to a heavy bomber force of devastating, though not necessarily final, strength, including a high proportion of the new types of heavy bomber now just beginning to come into service.

271. The Air Ministry consider that, provided the necessary quota of trainer aircraft can be made available, this programme, which is based on aircraft production, can reasonably be expected to be maintained with trained personnel and completed within a reasonable period of time, not less than 2 years—subject, of course, to certain factors which cannot be forecast in any programme, such as the intensity of operations in the intervening period and the extent of interruption of home production by enemy action.

**Target Programme of First Line Squadrons.**

|                | Heavy Bombers | Medium Bombers | Fighters | G.R. Land- | G.R. Flying- | Army Co- | Total |
|----------------|---------------|----------------|----------| planes(*)  | boats(*)    | operation(*) |       |
| Metropolitan   | 100           | 1,600          | 25       | 49         | 1,483       | 17       | 270   |
| Overseas       | 3             | 48             | 28       | 416        | 23          | 93       | 90    |
| Total R.A.F.   | 103           | 1,648          | 51       | 816        | 136         | 1,856    | 262   |
| Dominions      | 40            | 51             | 29       | 558        | 20          | 17        | 60    |
| Unforesee liabili ties and foreign orders | 5 | 40 | 10 | 190 | 3 | 36 | 36 |
| Total production for | 103 | 1,648 | 76 | 1,198 | 883 | 218 | 440 |

(*) Including T.B.G.R.
(1) Token figures.
(2) R.F. squadrons M.E. and India.
(3) Including 4 squadrons amphibians for Canada.
(4) Including 9 squadrons general purpose for Australia.
(5) Includes high proportion of types suitable for day operations and the support of the Army.
Probable state of readiness and ability of certain countries to rise against the Nazi Régime.

General.

The internal tendencies in enemy and subject territories may be an important contributory factor in the defeat of Germany. The position in each country is summarised below. For purposes of comparison the estimated conditions as at March 1941 have been selected.

Germany.

2. At the moment the Germans are neither ready nor able to rise against the Nazi régime, and it is considered that the country is more firmly united behind Hitler than ever before. By next Spring, the German morale will be weakened by monotony of diet, air bombardment and propaganda, but it is considered that it will be by no means broken. Should the shortage of food through blockade become severe, it is possible that local revolts might occur inside Germany, but this could only occur if the effective control of the authorities were very greatly reduced by disorganisation of communication and inter-communication facilities on a widespread scale. Even in the latter case, however, the existence of the records of the Gestapo are likely to have a severe limiting effect.

3. There are certain areas however, which are believed to be particularly fruitful to disaffection. These areas are, in order of importance:—

(a) The Ruhr and the Rhineland.
(b) Hamburg, Bremen, Stettin and the North Coast ports.
(c) The Silesian industrial districts, especially the recently incorporated parts.
(d) The Sudetenland.

4. In the event of food shortage on a large scale ensuing in Europe during the coming winter, it is considered that Germany is likely to suffer less than the majority of other countries for two reasons. In the first place, the nation has for a number of years been systematically accustomed to a greatly reduced diet, which has undoubtedly increased its ability to withstand privations. Secondly, the Germans, in their position as masters of the land mass of Europe, and as possessors of the most efficient system of administration and transportation in Europe, should be able to ensure that reasonably adequate proportions of available supplies are made available for the use of their own population.

5. It may be concluded, therefore, that, in the absence of a serious military disaster, there is no likelihood of any serious risings in Germany against the Nazi régime by March 1941. The situation beyond that date is conjectural, and will depend on the extent to which the internal conditions and morale in Germany are affected by increasing air bombardment and the effects of economic pressure. It is improbable that any large-scale rising will occur from below, but internal security will become a growing commitment, and disaffection within the Army and Party may arise.

Austria.

6. There is every evidence that Austria has now accepted German domination. It is not considered that the Austrians are ready or able to rise against Germany.

Poland and Czecho-Slovakia.

7. Although it is not considered that the existing Polish and Czecho-Slovakian subversive organisations, amounts of arms and materials, and the possibilities of supply, will be far enough advanced by March 1941 to merit a general rising, yet it may be stated that these countries are the most likely to be in a position to rise against Germany next Spring for the following reasons:—

(a) The historic hatred existing between the Poles and the Czechs on the one hand and the Germans on the other.
(b) The adaptability of these nations to revolution and subversive activities acquired by past experience in subjugation to Russian, Austrian and German invaders.
The present existence of a very active organisation inside Poland with revolution and guerrilla warfare as its primary aim.

Outside organisations actively at work in collaboration with us having the same end in view.

The existence of considerable but insufficient quantities of arms and explosives hidden in the country.

The existence of connecting links in surrounding Balkan countries with considerable supplies of materials at their disposal in Alexandria.

The existence of a special department of the Polish General Staff for this work.

8. German reprisals against acts of sabotage and subversive activity have, however, been of such a brutal character, and the spread of German influence in the Balkans has been so marked, that Polish and Czech subversive activities supported by us have been seriously handicapped of late. Ways and means of overcoming these present difficulties are under consideration at the moment.

9. It is considered, however, that although the Poles and Czechs are far advanced in comparison with other countries, any rising is doomed to failure unless accompanied by successful major operations against Germany by Great Britain or a general rising in other parts of Europe.

10. It is probable that the prevention of premature and spontaneous risings in these countries will become increasingly difficult during the coming winter; under the threat of famine and want will tend to drive certain groups to ill-timed activity. The effect of this on further subversive activities in these countries would be disastrous.

Italy.

11. There are indications of considerable anti-Fascist movements throughout Italy, particularly in the industrial areas of the North. It is impossible, however, to state now to what extent the country will be ready and able to rise against the Fascist régime by the end of March 1941, since this will depend on what occurs in the interval. Italy's readiness to rise against the Fascist régime will be in direct ratio to the degree of success which attends our arms between now and March 1941 and will also depend on the degree to which the war can be brought home to the Italian population in the Peninsula itself. If, for instance, we should be able to bomb objectives in Italy continuously throughout the winter, and if during the same period we were to sink a large proportion of the Italian Fleet, then Italy might well be ready to rise against the Fascist régime by next Spring.

12. Whether she would be able to do this, however, is another question, and would depend on the degree of control which Mussolini is able to exert through the Fascist police and militia aided by the Germans. This in turn will be largely influenced by the extent to which the régime is weakened during the coming winter. In the last resort it would depend on the attitude of the army and this is impossible to assess at present.

Conditions in Italy, therefore, point to the importance of weakening the régime with all the means at our disposal, especially air bombardment, intensification of the blockade, offensive naval and land operations and propaganda.

13. Conditions in Italian East Africa justify special mention since this colony is isolated from Metropolitan Italy. The control of the Abyssinian interior already occupies the attention of a proportion of the Italian garrisons, and the necessary conditions for stimulating a rising of the tribes are already in being. So long as the present scale of our attack is not increased the Italians should be able to maintain control and to hold out perhaps till the summer of 1941. An increase in the scale of attack would, however, improve the prospects of bringing about a large-scale revolution throughout Italian East Africa. In any event it is necessary that everything possible should be done to create such internal conditions in Abyssinia as will not only occupy the attention of a large proportion of Italian troops, but will also compel them to resort to oppressive action on a wide scale, thus compelling them to expend their limited resources.

France.

14. It is too early yet to be able to give any reliable forecast as to the likely position in France next Spring. Much will depend on the policy adopted by the
Germans in the occupied areas, and the extent to which German propaganda on the one hand, and the irritating effect of a hostile occupation on the other, will or will not succeed in setting the various sections in France against each other. German propaganda will aim to set the French against us. It is therefore important that British propaganda should bring home to the French the fact that their only salvation lies in the ultimate victory of Great Britain, and that Germany is responsible for their condition. In North Africa the Arabs provide useful material upon which subversive organisations can be built, but here also, their economic difficulties may be exploited by Germany to our disadvantage.

Belgium.

15. Such information as we have from Belgium at the moment suggests that German propaganda has been very successful there. However, with their tradition of resistance, it is to be hoped that when the hardships inseparable from the Nazi régime this coming winter have taken their toll the Belgian people will be fruitful ground for subversive activities.

Holland.

16. The Dutch are already, according to reports, beginning to revive, and obstruction is beginning to grow. There is, therefore, a possibility of creating a "freedom party" in this area. A nucleus organisation to this end has been left behind, together with a certain amount of material, but so far attempts to get in touch with this organisation have failed.

Denmark.

17. The prospects of subversive activities in Denmark on any scale are very small indeed.

Norway.

18. Reports indicate that the Norwegian people are becoming more and more dissatisfied with the German rule, and would be prepared, at least in the west, to take part in disturbances against the Germans, provided that they can be organised, given supplies of explosives, arms and ammunition, and directed as to their employment. The Norwegian Government are anxious to formulate plans for extensive operations of this sort with the British Authorities. At the time of invasion steps were taken to initiate the formation of a "freedom party": this party has been created, and exists on a comparatively large scale.

19. While the long nights and snow in the winter should make the suppression of revolt somewhat difficult, yet it must be remembered that Norway is a country which can be effectively kept in hand by control of a few big centres. The present German garrison of 12 divisions also is more than adequate to keep the country in subjection.

20. It is not considered, therefore, that the Norwegians, unassisted from outside, will be in any position to carry out effective revolts by next Spring. The best that can be hoped for is some local co-operation with coastal raids and forays carried out from this country.

Albania.

21. Communication has been established with the dissident elements from and in Albania. There should be little difficulty in creating at least a considerable amount of unrest in this area, though it is doubtful whether this would be big enough to be described as a rebellion. To plan a successful revolt the concurrence, if not the assistance, of the Yugoslavs and Greeks would probably be necessary.

Spain and Portugal.

22. If the enemy overruns these countries, there are various sections which provide a nucleus for revolt, including the large numbers of Spaniards who fought against Franco in the Civil War, but it would clearly prejudice our policy of supporting the powerful forces in the present Spanish Government who are opposed to Spanish intervention in the war, if we now become involved in any intrigues with anti-Franco émigrés.
### APPENDIX II.

**German Naval Forces, 1940-1942.**

<table>
<thead>
<tr>
<th>Nominal Strength.</th>
<th>August 1940</th>
<th>August 1941</th>
<th>August 1942</th>
<th>Annual rate of war wastage to date.</th>
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<tr>
<td><strong>Battleships(1)—</strong></td>
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<td><strong>Destroyers (5)</strong></td>
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<td>18 + 4</td>
<td>26 + 4</td>
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<td>280 + 29</td>
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<td><strong>Armed Merchant Cruisers (11)</strong></td>
<td>6</td>
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</table>

### Notes on Appendix II.

1. **Battleships.**
   
   **Bismarck**—At Blohm and Voss, Hamburg, apparently completed on the 17th May, 1940. Expected to start trials at any time now, but is unlikely to be effective before September 1940.

   **Tirpitz**—At Wilhelmshaven in advanced stages of completion on the 14th July, 1940, but is unlikely to be effective before December 1940.
H.
The laying down of this ship has never been confirmed and there is no sign of activity on the slip vacated by Tirpitz, where her hull was expected to be built.

I.
Reported to have been laid down at Blohm and Voss, Hamburg, on the 1st July, 1940. One large ship has been located on these slips but her outline does not suggest that of a battleship.

The remarks on "H" and "I" above are insufficient evidence on which to discount all reports of these ships. The fact that the name Deutschland has been taken out of the fleet and reserved for future use is indicative that the vessel intended to bear it may yet be located; even so it is considered unlikely that such a vessel could be in service by August 1942.

Although the old battleships Schlesien and Schleswig-Holstein are used as training ships, the latter took part in the Polish War at Danzig.

Aircraft Carriers.

Graf Zeppelin. — Graf Zeppelin was reported on and photographed at Kiel in October 1939. On this evidence her completion was expected in February—March 1940. Reports describing a carrier on trials confirmed this and she has now been accepted as effective.

Carrier "B." — Although this ship was believed to have been laid down at Kiel shortly before Graf Zeppelin, little further had been heard of her until the 7th April, 1940, when an Aircraft Carrier was located at Kiel, apparently in advanced stages of completion. This may have been Graf Zeppelin or Carrier "B." On the 15th July this vessel had left Kiel, possibly for a safer berth subsequent to the bombing attacks on the 1st July.

The two carriers have never been located simultaneously and it is possible that in fact only one exists; progress on the second having been suspended on or before the start of the war.

Cruisers (8-inch).

Seydlitz. — The conflicting reports received earlier have been cleared up by air reconnaissance of Bremen on the 9th July, which showed the ship nearly complete at her building yard. She may be expected to start trials soon, but is unlikely to be effective until after August 1940.

Ex-Lutzev. — In December 1939 and subsequently a series of rumours became rife over the question of Russo-German co-operation. One of these referred to an exchange of German Warships for other benefits. Among all the different versions it was hard to pick the truth. Part of the bargain is now plain for the ex-Lutzev was taken, in an uncompleted state to Baltic Yard, Leningrad, in June 1940.

Cruisers (6-inch).

Of the projected 6-inch cruisers, M, N, O and P, the outline hull of one was located on the slips at Wilhelmshaven in November 1939, but has since been dismantled and the slip is now vacant. One has been located on a slip at Kiel. There is no trace of the other two and it appears likely that they shared the fate of the one at Wilhelmshaven.

Destroyers, T.Bs. and Escort Vessels.

The numbers tabulated are conjectural only, for the German policy regarding replacement of losses in these categories is obscure and direct evidence as to construction is lacking.

U-boats.

The rate of U-boat building has not so far reached expectations, but there are signs that it is now increasing. The numbers completed to date are comparable to those completed during the first year of the last war, and subsequent forecasts are of the same order.

E-boats.

Although up to 50 of these craft may have been completed, those operating do not appear to exceed 3 flotillas of 12–14 boats each. The waters in which these
boats can operate are restricted, and although almost any numbers might be built it is doubtful whether numbers greater than those forecast could be usefully employed.

(8) Minelayers.

The Cruisers *Emden* and *Koln* Class, together with Destroyers, U- and E-boats, are capable of minelaying, as also are a number of smaller vessels, for local defence minning.

In addition, four fast passenger ferry steamers have been converted for the purpose.

In 1938 four ships, designated Mine Transport Vessels, were laid down or projected, of which no details have yet been received. Three unclassified vessels have now been located at Kiel in advanced stages of completion, and another similar length hull has been identified. It is possible that these are the vessels referred to and they are likely to be minelayers.

(9) Gunnery School Tenders.

These vessels are included as they have been identified taking part in Naval operations in Norway.

(10) Minesweepers, A/S and Patrol Craft.

These consist of "E," and "M" Class minesweepers, trawlers, fishery protection vessels, &c., to the flotillas of which various old T.Bs. and Escort Vessels act as depot ships. Additional similar craft for the extended coast-line of German occupied territory are probably available in sufficient numbers in the occupied countries to obviate any large building commitment in this category.

(11) Armed Merchant Cruisers.

These are believed to be three such craft now operating abroad. There is no reliable information as to what other ships have been prepared, but an additional three would seem reasonable. Germany has a total of some 40 vessels suitable for similar conversion.

(12) German Naval Captures.

Additions of importance which may be made by the use of vessels taken over from invaded countries are shown with a plus sign following the German figure in that category or year in the attached table. The position regarding French ships is still obscure, and the major additions now included from this source are submarines building at Havre and Trait on the Seine.

(13) Limiting Factors and War Wastage.

The limiting factors are probably materials, slip capacity and skilled labour. It appears that in suspending or abandoning construction of larger vessels Germany has taken steps to mitigate the effects of all these three.

The German Navy is largely of modern construction, and wastage other than losses in action should not be great. The latter is difficult to forecast as it depends on the type and extent of both our and enemy activity. The annual rate based on losses to date is shown tabulated.
German Land Forces.

1. The probable strength of the German Army on the undermentioned dates will be as follows:—
   
   (a) August 1940—
   - 189 infantry divisions.
   - 10 armoured divisions.
   - 6 motorised divisions.
   - Independent tank units (numbers unknown).
   
   (b) August 1941—
   - 184–185 infantry divisions.
   - 14–15 armoured divisions.
   - 6 motorised divisions.
   - Independent tank units (numbers unknown).
   
   (c) August 1942—
   - 175–176 infantry divisions.
   - 19–20 armoured divisions.
   - 10 motorised divisions.
   - Independent tank units (numbers unknown).

2. The total number of divisions has been kept at the figure of 205. This figure is based on the estimated manpower available after meeting the demands of industry and on the past policy of the German Army. The limiting factor in the number of armoured and mechanised formations will be the output of A.F.V.s. and the provision of trained technical personnel. It is assumed that the ten armoured divisions used against France will require until the end of 1940 to refit and replace losses. Thereafter armoured divisions may be formed at the rate of 5 per year.

3. Active operations involving casualties would cause the total of divisions to be decreased.

4. Germany is likely to require the following forces for the preservation of order in occupied territories in Europe:

   ![Table of divisions](image)

5. The existing distribution of German motorised and armoured divisions is:

   ![Table of divisions](image)
### APPENDIX IV.

**Italian Naval Forces, 1940–1942.**

<table>
<thead>
<tr>
<th></th>
<th>Nominal Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>August 1940</td>
</tr>
<tr>
<td>Battleships</td>
<td>6</td>
</tr>
<tr>
<td>Cruisers, 8-in.</td>
<td>7</td>
</tr>
<tr>
<td>Cruisers, 6-in.</td>
<td>11</td>
</tr>
<tr>
<td>Cruisers (old)</td>
<td>4 (old)</td>
</tr>
<tr>
<td>Destroyers</td>
<td>64</td>
</tr>
<tr>
<td>T/Bs (600 tons)</td>
<td>35</td>
</tr>
<tr>
<td>Submarines</td>
<td>105</td>
</tr>
<tr>
<td>A/C Tender</td>
<td>1</td>
</tr>
<tr>
<td>Motor Torpedo Boats</td>
<td>101</td>
</tr>
</tbody>
</table>

**NOTES.**

**Battleships.**—There are two 23,500-ton battleships, lately reconstructed, in service. Two further battleships of the same class now undergoing reconstruction should be in service at any time. Two new 35,000-ton battleships are completed but will not, probably owing to the exigencies of working up, become effective fighting ships until about August 1940. There are two further 35,000-ton battleships building, the one launched in November 1939 and the other possibly in June 1940. It is not thought that either of these ships will be ready for service until after August 1942.

**8-inch Cruisers.**—There are no 8-inch cruisers either building or, it is thought, projected, so that none is at all likely to come into service by August 1942.

**6-inch Cruisers.**—There are two 6-inch cruisers projected by the 1939 programme. These have not, it is thought, been laid down and will not be ready for service by August 1942.

**Other Cruisers.**—There are 12 cruisers of 3,300 tons buildings. They were laid down towards the end of 1939. It is not thought that work on them has progressed much, but they may be ready for service by August 1942.

No other cruisers are thought to be building or projected, and, in view of recent Italian statements bearing on naval construction, it is not thought likely that the construction of any further cruisers of the classes mentioned above will be undertaken for some time to come.

**Destroyers.**—There are 8 destroyers projected by the 1939 programme. These have not yet, so far as is known, been laid down. Italian destroyers have been built in 12 months, so that, although no new destroyers are likely to be completed by August 1941, it is quite probable that 12 may have been completed by August 1942. (Twelve were building during 1938, which is the maximum number known to have been simultaneously on the stocks at any previous time.)

**Torpedo Boats.**—There are 4 T.Bs. projected by the 1939 programme, not, so far as is known, yet laid down. The period of construction may be taken as about a year. Sixteen were building during 1938, and it is reasonable to suppose that up to 20 may be completed by August 1942.

**Submarines.**—Four submarines of 1,400 tons are building and may be expected to be in service soon after August 1940. Twelve submarines are projected by the 1939 programme. This number by no means exhausts the capacity of the Italian yards which have had up to 24 submarines building at the same time in the past. Submarines of the ocean-going classes can be completed in one year. It is thought that the 4 submarines now building and 12 additional submarines may be in service by August 1941 and an additional 20 by August 1942.
## APPENDIX V.

**Strength of the British Fleet.**

<table>
<thead>
<tr>
<th>Type of Vessel</th>
<th>August 1940</th>
<th>June 1941</th>
<th>January 1942</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Ships</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aircraft Carriers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cruisers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Armed Merchant Cruisers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Destroyers</td>
<td>178</td>
<td>224</td>
<td>252</td>
<td></td>
</tr>
<tr>
<td>Submarines</td>
<td>47</td>
<td>61</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>Screwed Ships</td>
<td>11</td>
<td>13</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Seaplane Carriers</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Minelayers</td>
<td>9</td>
<td>10</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Anti-Aircraft Ships</td>
<td>10</td>
<td>16</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Sloops</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Motor Torpedo Boats</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Gunboats  (Anti-E. Boat)</td>
<td>6</td>
<td>33</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>Anti-Submarine Vessels (includes Corvettes and A/S Trawlers)</td>
<td>197</td>
<td>408</td>
<td>428</td>
<td>See remarks against minesweeping vessels.</td>
</tr>
<tr>
<td>Motor Launches  (&quot;Fairmile&quot; type)</td>
<td>9</td>
<td>190</td>
<td>210</td>
<td></td>
</tr>
<tr>
<td>Motor A/S Boats</td>
<td>12</td>
<td>34</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>Minesweeping Vessels</td>
<td>480</td>
<td>857</td>
<td>908</td>
<td></td>
</tr>
<tr>
<td>Auxiliary Patrol Craft</td>
<td>573</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harbour Defence Patrol Craft</td>
<td>150</td>
<td>226</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>Aircraft—Carrier borne (Initial Equipment)</td>
<td>247</td>
<td>301</td>
<td>418</td>
<td></td>
</tr>
<tr>
<td>Aircraft—Catapult (Initial Equipment)</td>
<td>66</td>
<td>84</td>
<td>98</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks.**
- * Excludes Queen Elizabeth undergoing reconstruction.
- Includes ex-Brazilian ships and 1 transferred to Polish crew.
- Includes minelaying submarines.
- 1 sunk by enemy action. May be repairable or guns transferred.
- Assuming additional orders are placed as present programmes approach completion.
- * Proposals exist to increase this figure by building in United States up to 60 boats.
- See remarks against minesweeping vessels.
- Figures show total of approved programme which completes July 1941. Construction of M.Ls. could then be continued at a rate of 20 a month which would give 310 M.Ls. by January 1942.
- New vessels are fitted for A/S in addition to M.Ls.
- The state and requirements of vessels for the Auxiliary Patrol cannot be forecast but must depend upon developments in the meanwhile.

*Note.—No allowance is made for losses which may occur.
### Overseas Garrisons (excluding India and Dominions)

<table>
<thead>
<tr>
<th>Region</th>
<th>Garrison at present considered necessary</th>
<th>Strength of existing garrison</th>
<th>Interim reinforcements proposed during the coming winter</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MIDDLE EAST</strong> (includes Egypt, Palestine, Sudan, Aden, East Africa)</td>
<td>Two armoured divisions</td>
<td>One armoured division (less one regiment)</td>
<td>One Indian infantry division (less one brigade group)</td>
<td>One Australian division (less one brigade group)</td>
</tr>
<tr>
<td></td>
<td>One cavalry division</td>
<td>One Indian infantry division (less one brigade group)</td>
<td>One British infantry brigade</td>
<td>One Indian infantry brigade</td>
</tr>
<tr>
<td></td>
<td>One corps of three infantry divisions</td>
<td>One Australian division (less one brigade group)</td>
<td>One New Zealand division (less two brigade groups)</td>
<td>One Indian infantry division</td>
</tr>
<tr>
<td></td>
<td>Two infantry brigades</td>
<td>Four infantry brigade groups</td>
<td>Local defence and internal security troops</td>
<td>Local defence and internal security troops</td>
</tr>
<tr>
<td><strong>WEST AFRICA.</strong></td>
<td>Four infantry brigade groups</td>
<td>Reserve and training units only</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FAE EAST.</strong></td>
<td>Three infantry divisions</td>
<td>Infantry only of one division</td>
<td>Two infantry divisions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>One light tank regiment</td>
<td>One 3·7-in. howitzer regiment</td>
<td>Equivalent of one field regiment (30—18-pdr. used for beach defence)</td>
<td></td>
</tr>
<tr>
<td><strong>ICELAND.</strong></td>
<td>Under consideration</td>
<td>Infantry only of one division</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>One field regiment</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NEW GARRISON</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>IRAQ AND IRAN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M.2 RESERVE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Totals.** The equivalent of 62 divisions* (of which two are armoured) The equivalent of 8 divisions (of which one is armoured) The equivalent of 89 divisions (of which one is armoured)

* These totals do not include the following battalions employed on local defence and internal security duties:—

- Egypt, Palestine and Sudan ... ... ... ... 19 battalions
- East Africa ... ... ... ... 3 battalions

**TOTAL ... ... 22 battalions**