

The first need is for troops trained to move freely over hilly country and physically fit to carry the "soldier's load" for long periods under active service conditions. The enemy appeared to be superior to our troops in this respect, and his mobility and powers of endurance were remarkable. In this connection I wish to record my opinion that the "soldier's load" is still far too great.

The second need is a proper appreciation of the value of ground and the willingness to quit valleys and get up on to high ground with confidence and determination.

The third need is the vital necessity for initiative and self-reliance on the part of subordinate commanders, and the necessity for teaching them that a weak threat to a flank can be ignored and need not be a menace entailing general retirement.

100. As regards equipment, the following lessons emerged:—

(a) The need for an automatic weapon capable of producing sustained and accurate fire at long ranges, that is the medium machine gun. The lack of such a weapon was severely felt, and the Bren gun was not adequate to perform many of the fire tasks which it was called upon to undertake. The Germans continually employed overhead fire from long range automatic weapons.

(b) The Bren gun tripod was found too heavy to move about over the hills for the "independent companies" which had no special transport for it. In such theatres as this, pack transport for this purpose would seem essential. "Tommy" guns were invaluable, and were successfully used by the enemy.

(c) The two inch mortar was found to be effective, but should have been supplied with a greater proportion of H.E. bombs. The German mortar, which appeared to have a range of about 1,500 yards, was reported as being not particularly successful as the shell seemed to have very little killing power, possibly due to over-fragmentation.

(d) Bicycles. The Germans made extensive use of these for their advanced guards, and the mobility thus achieved was remarkable.

(e) Three Bren gun carriers of one of the battalions proved of great value, particularly in assisting the withdrawal of rear parties.

(f) 25 pounder field guns proved efficient and were found to be more manoeuvrable than was expected. No difficulties of crest clearance were reported.

(g) Signal equipment. The Marconi sets supplied to the Independent Companies were useless. They were too heavy to be carried, and had insufficient range. No. 18 set as used on the frontier of India, would have been more suitable. No. 11 set proved most useful, and also the Lucas signalling lamp. Personnel were insufficiently trained to get the best value out of heliographs.

101. The Arctic boots were reported in all cases too big. Boots two sizes only above the normal are needed to ensure a correct fit.

Skis are essential for operations in snow, but the men must be really well trained and specially selected. Only a portion of a unit, however, need be fitted with skis if the remainder are equipped with snow shoes. The battle dress and leather jerkin proved most serviceable, but

a proportion only of fur-lined coats, sufficient for guards and sentries, need have been issued.

It is considered that gas masks and steel helmets need not usually be worn in operations of this nature.

In country such as this, some form of pack transport is essential to ensure full mobility. The Germans made considerable use of impressed ponies, and also of Norwegians impressed as porters.

102. Such demolitions as were carried out had surprisingly little result in stopping the enemy even though effected with complete thoroughness. It is believed that the Germans made extensive use of improvised rafts and rubber boats to cross rivers and narrow fjords. In fact the enemy's thoroughness and foresight in providing everything required for fighting were extraordinary.

103. Co-operation with the Navy in the landing operations carried out by the French Army has been close and effective, but the operations have been handicapped to a marked degree by lack of suitable equipment.

For the landing in the Herjangs Fjord on the 13th of May only four Assault Landing Craft and two Motor Landing Craft were available, and many of the troops had to be taken ashore in open boats.

Thanks to the weakness of the enemy's resistance at the points selected for landing and the skill and determination with which the operation was carried out it was successful, but had the resistance proved to be more serious the results might well have been very different.

Again, the plans for the landing on the peninsula North of Narvik had continually to be changed and postponed owing to the lack of proper landing craft, particularly of Motor Landing Craft which were required to land tanks. These Motor Landing Craft were also in constant demand for the vital task of landing heavy anti-aircraft guns for the protection of the base area.

The landing at Narvik was also successful thanks to the most effective co-operation of the Royal Navy, the excellent support given by the guns of H.M. Ships and the skill and determination of General Bethouart's troops, but with the facilities available the transfer of three battalions across a narrow fjord some 1,500 yards wide took over seven hours, and the strength of the first flight had to be limited to 300 men.

The landing of such a small advanced party on a hostile shore entailed considerable risk, and in view of the likelihood of such operations having to be repeated in other theatres of war it is urgently necessary that an ample supply of modern landing craft should be provided without further delay. It is unfair to expect any troops to undertake such hazardous operations with such inadequate means.

104. The control of the civil population in a war zone is always a matter of great difficulty and particularly so in an Allied country, and it was found almost impossible to impose any restrictions upon the movement of civilians by land or water or upon telephone and telegraphic communication.

There have been therefore ample opportunities for the enemy to obtain military information from agents or to organize sabotage. Had the campaign been continued it would have been