Excerpt from iUniverse book: "Booklet on Naval War changes Climate" by Arnd Bernaerts

CHAPTER B, Arctic winter 1939/40, page 23

Minesweeping

Minesweeping activities were another particularly effective means of churning and turning huge sea areas day-by-day, since the war started. A standard mine was the moored contact mine, a buoyant material filled with up to 1,000 kg of explosive. To avoid detonation, special ships used distant means to cut the mooring chain or wire attached to the mines to keep them afloat. Sometimes, the mines exploded before reaching the surface and if they surfaced they were blown up with rifle shots.

In November 1939, magnetic mines entered the scene. They could only be destroyed through forced explosion. From the climatic point of view, this was the worst case scenario. The mine was exploding in its location, at a depth of 20 or 50 metres, producing the biggest possible "stirring" effect in the water column reaching above. The countermeasure was to deactivate the ship's 'magnetism' so that it could pass near the mine without activating it.

Minesweeping proved to be a tremendous, round-the-clock operation which implied covering millions and millions of sea miles in order to detect and destroy the 'in waiting weaponry'. The efforts made during WWII were of huge proportions. German Defence machinery against Allied mining operations involved 46,000 personnel, 1,276 sweepers, 1,700 boats, and 400 planes, whereas the British Defence against Axis mining operations involved 53,000 men and 698 sweepers, plus many hundreds of fishing and auxiliary vessels.