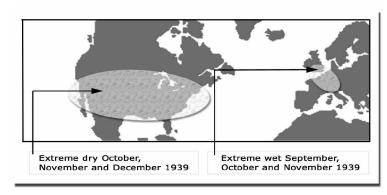
## Excerpt from iUniverse book: "Booklet on Naval War changes Climate" by Arnd Bernaerts

## CHAPTER B, Arctic winter 1939/40, page 34

## b. Where did all the water come from?

One can discuss the matter under two aspects:

- 1. where did so much water vapor come from?
- 2. how was it brought down?

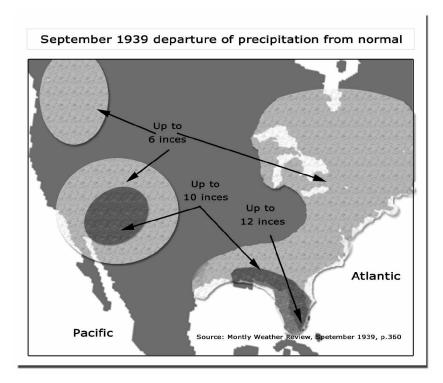


Since the 1<sup>st</sup> September 1939, a huge defense area going from Basel to Dunkerque (Maginot Line) and from Basel to Emden (Westwall) was activated and guarded by one million soldiers on each side. From that moment on, encounters of different proportions,

shelling, air fights, and aerial bombings occurred frequently. On the 7<sup>th</sup> of September 1939, 700 French tanks moved several miles into German territory, while 300 airplanes attacked German positions in an industrial region and munitions area, some 125 miles farther north.

Meanwhile, explosions of sea mines and of depth charges, shelling among enemy ships or ships versus coastal battery, and thousands of ship movements churned and turned around the waters of the North and Baltic Seas. Evaporation rate increased significantly. Water vapour attracted cold air flowing in from the north-east and pushing the excessive water vapour in the south-west, towards Westwall and Maginot Line, including South England. There started a record rain period for which we state three reasons:

1. Naval activities 'produced' a high and constant humidity all over the western war front, including the SE of England, North of France, North of Switzerland, Bavaria, and, further north, the Netherlands, the West, Middle and South of Germany (including Berlin and Silesia).



- 2. Water vapour condenses using the molecules as condensation nucleus. Condensation occurs on a wide variety of aerosol particles e.g. particles of dust, salt, desert sand or smoke. Ambushes and burning down of villages and cities in Poland (in September) and frequent military encounters on the front lines produced abundant condensation nuclei. Clouds formed and eventually 'burst' into rain.
- 3. North-easterly air was cold. When high humid air laid over Western Europe and resisted being pushed farther south, arriving air would cool down the high humid air and it would inevitably rain.

A Reuters' report from the 5<sup>th</sup> of May 2006 can help us demonstrate that the Second World War activities played a major part in the phenomenon of rainmaking: Chinese technicians have artificially generated heavy rainfall. 163 pieces of cigarette-like sticks containing silver iodide were burned and launched by seven rocket shells in six districts and counties for a cloud seeding operation, which resulted in the heaviest rainfall in Beijing in this spring.

The scenario seemed perfect: plenty of water vapour in the atmosphere, abundant condensation nuclei and a constant cold air incoming from the north-east. All these physical conditions lead to abundant rains in Western Europe.