



Is Weather Routing Really Worth It?

Although safety of crew, vessel and cargo are the most important elements of any voyage, substantial fuel savings is also a key deliverable expected from a weather routing provider.

The fundamental goal of weather routing is to help the captain answer three main questions:

1. Which route will minimize any risk of damage to crew, vessel and cargo?
2. How can we arrive at a fixed time or to achieve the required ETA?
3. How can we sail the optimal route with minimal cost?

The IMO has publically stated that weather routing saves at least 3% in fuel consumption, not including time savings [1]. For some vessels, such as container ships, that number increases up to 10%.

In 2018, StormGeo Route Analysts routed approximately 64,000 voyages across the world. With an average consumption of about 30 MT of fuel per day and average voyage time of 17.5 days, the total consumption for all of these voyages was 33,750,000 MT of fuel. With a 3% reduction in consumption from weather routing, we can calculate that StormGeo enabled a staggering savings of 1,012,500 MT of fuel. At today's \$400/MT, that is a whopping \$405 million in fuel savings per year.

With sustainability in mind, we have calculated that this amount of fuel would have added more than 3 million MT of CO₂ and 35,000 MT of sulphur to the atmosphere. Reducing these emissions equates to the removal of 600,000 cars from the road for an entire year.

While these numbers are an annual approximation, the impact of 3% is clear – millions in fuel and emissions savings, just with effective use of weather routing services or products. While some companies feel that there is a conflict between going green and maintaining a profitable business, these numbers demonstrate how sustainable practices can actually have an economic benefit.

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StormGeo

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with weather
routing

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[1] IAMU, Istanbul Technical University, *Improving Energy Efficiency of Ships Through Optimisation of Ship Operations*, 2014

“ *The combination of the onboard system and the onshore route recommendation is a win-win situation. We not only save money, we save the environment and increase the safety of the crew, cargo and ships.* ”

Erik Hjortland, Manager Fleet Performance and Bunkering, Odfjell

MAXIMIZING FUEL EFFICIENCY WITH WEATHER ROUTING

A research project led by the International Association of Maritime Universities stated, “The shortest distance between two points (ports) is not always the fastest due to currents, wave height and winds. When the modern systems are integrated with the bridge computers, fuel efficient routing is possible according to real-time weather routing services. In this way, it is possible to provide fuel economy up to 10%.”

During a long-haul voyage by Odfjell, StormGeo assisted ship masters in avoiding severe storms in the Pacific—reducing fuel consumption by 1,000 MT (3000 MT of CO₂) and saving 30 sailing days in the first 90 days with the combined power of onshore route recommendations and onboard systems.

“With the onboard software [BVS], the captain can visualize the recommendation made by StormGeo. We believe that this is vital. One thing is to read the route recommendation, another thing is to be able to actually see it and model it in the system by yourself,” said Erik Hjortland, Manager Fleet Performance & Bunkering for Odfjell. “The combination of the onboard system and the onshore route recommendation is a win-win situation. We not only save money, we save the environment and increase the safety of the crew, cargo and ships.”

According to StormGeo data, 50% of all calculated optimized routes by StormGeo’s software are not followed by the bridge due to implementation challenges. For a fleet of 30 vessels sailing at 30 MT/day on 17.5-day voyages, this means almost \$100,000 in bunker that could have been spared.

IS WEATHER ROUTING WORTH IT?

The simple answer is yes, weather routing is very much worth it as long it is used. The return on investment is high, little training is required and 24/7 support from Route Experts is provided.

While the benefits of weather routing are proven, how much you profit is a matter of how well the products and services are implemented and adopted by the crew. ♦