



## 4- THE CREATION OF BUBBLES - HOW COME SEA FOAM IS WHITE?

During a day spent in the port of Survagur we decide to go for a short walk, lasting about two hours. We go to see the largest lake in the archipelago, whose water falls into the sea after a few metres in the free fall of a waterfall: an unprecedented spectacle.

Before reaching the waterfall, we walk along the cliffs, which show themselves in all their grandeur: dark rocky cliffs fall sheer into the sea, which crashes down on them. Looking more closely at this phenomenon, from which the force of nature shines through, I am struck by the chromatic contrast generated by the white foam of the wave against the wall of rock as dark as ebony wood. The optical effect is splendid, and reminds me of Hokusai's painting, The Wave. I ask myself: how is it possible that the water, which until a moment ago was transparent, could become so white for a brief moment before returning to its original colour?

### Scientific explanation

Sea foam is an unstable mixture of air bubbles. To form, it needs something that reduces the attraction between the molecules and thus encourages the formation of bubbles. This is usually organic material naturally dissolved in seawater. Surface winds or waves crashing against the shore or rocks trigger the formation of foam, mixing the water with the air and promoting the formation of countless micro-dusts. The whiteness of the foam is due to the myriad air bubbles it contains, which reflect light in all directions.

