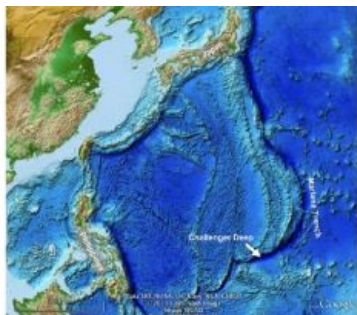


Mariana Trench Teeming with Bacterial Community



An international research team has found a highly active community of bacteria in the bottom of the Mariana Trench located nearly 11 kilometres below sea level, which makes it the deepest site on Earth. The analysis documents that the trench sediments house almost 10 times more bacteria than in the sediments of the surrounding abyssal plain at much shallower water depth of 5-6km water – even though the environment at a depth of 11km is under extreme pressure: almost 1,100 times higher than at sea level.

The participating deep-sea experts, among them scientist Frank Wenzhöfer from the Alfred-Wegener-Institut and the Max-Planck Institute in Bremen, had built a special deep-sea robot to measure the distribution of oxygen into these trench sediments as this can be related to the activity of microbes in the sediments. According to Wenzhöfer, the deep sea

trenches are some of the last remaining “white spots” on the world map. Very little is known about what is going on down there or which impact the deep sea trenches have on the global carbon cycle as well as climate regulation. They also are interested in describing and understanding the unique bacterial communities that thrive in these exceptional environments.

These results have been published in the latest issue of [Nature Geoscience](#).