

The influence of drilling and fluids on the development of microbial communities ...

[Environment](#), [Earth](#)



Report

Research has shown that different basement fluid horizons that are found underneath the Earth's crust are a host of a number of microbial communities. There are significant changes that occur to the behavior of these microbial communities after drilling takes place. It is indicated that drilling increases the level of fluids available in the microbial habitats. This in turn improves the conditions of survival and multiplication. Microbial communities are observed to increase significantly as a result of drilling and fluids increase in their habitats. There can also be an indication that microbial communities' composition is affected by the activities of drilling and the mixing of sea water with that of borehole fluids.

It is also shown that drilling stimulates the increase in temperature and mixing of sea water with borehole fluids. Consequently, the mixing of sea water and borehole fluids suggests that the site-specific characteristics of microbial communities are altered significantly. This contributes to the change of the composition of these microbial communities. Another experiment conducted to find out about the concentration levels of different chemicals such as ethanol and the pH showed that borehole fluids are significantly different from those that are found on the surface of the earth. Drilling water also stimulated production of sulphur and the related products making the subsurface habitation to be a little more acidic than the surface. On this lecture, it was also observed that salty water did not stimulate the multiplication and production of the microbial community but temperature and the PH are the main contributors to the increase of the microbial communities in the subsurface communities. Therefore, drilling which allows

the mixing of sea water and borehole fluids influences the development of microbial communities.

Work Cited