

**EARLY WARNING BULLETIN No. 1 ON GROUNDWATER QUALITY
IN DAKAR, SENEGAL - JANUARY 2002**

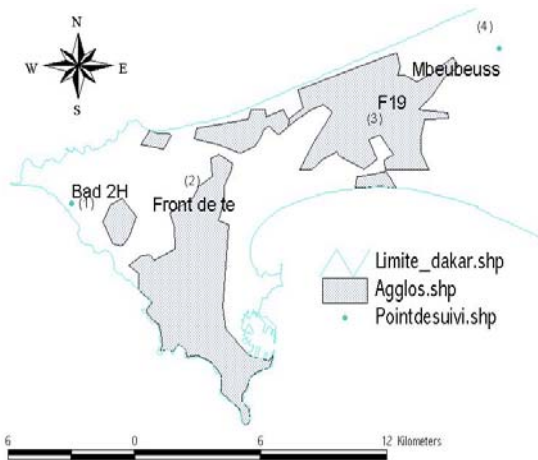
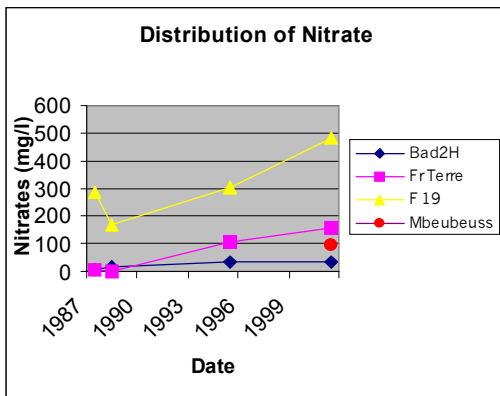
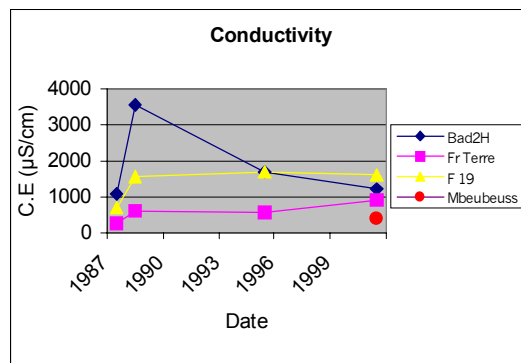
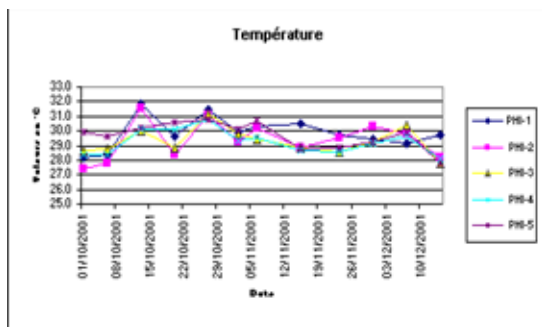


Figure 1: Map of monitoring wells (F19 zone = upstream zone; downstream zone)

Water in the Dakar aquifers, which is tapped for the urban supply system, showed a variation in contamination between the upstream and downstream zones. Contamination was greater in the upstream zone, where the peripheral districts have no sewerage system, than in the downstream zone, which is covered by a sewerage system. This situation has resulted in progressive contamination of the aquifers, which is endangering the water resources of the entire peninsula.

The distribution of nitrate concentrations in the aquifers indicates a gradual increase from east to west, i.e. from the free zone to the enclosed one. Widespread contamination of the aquifer by nitrates is imminent, as indicated by

the high nitrate concentrations in the boreholes in the upper part of the peninsula, which are also nearest to the peri-urban area of the city (the monitoring site of the continental front). In the event of contamination of the peri-urban aquifer, other pollution due to human activities – including bacteriological and parasitological pollution, and heavy metal pollution – are likely to cause further deterioration of the aquifer's water quality. However, it is still possible to control the situation, and bacteriological analyses are in progress at the monitoring sites.



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