

## Microbiological analysis of sea water and bottom sediments in Kosakowo – Gdańsk profile

### Material and methods

Samples of water and sediments were collected on: 13.08.2013, 19.11.2013 and 13.03.2014

Water samples were collected at two levels: water surface and bottom water.

Water samples were analysed for the following:

most probable number of *Enterobacteriaceae* genus bacteria [MPN/100ml],

- most probable number of *Escherichia coli* bacteria [MPN/100ml],
- number of intestinal Enterococci, by filtration method, on Chromocult Enterococen Agar (MERCK), [cfu/100ml]
- most probable number of *Clostridium perfringens* bacteria, using liquid TSC medium in anaerobic conditions [cfu/100ml].

Sediment samples were analysed for the following:

most probable number of *Enterobacteriaceae* genus bacteria [MPN/100g of wet sediment],

- most probable number of *Escherichia coli* bacteria [MPN/100g of wet sediment],
- number of intestinal Enterococci, by filtration method, on Chromocult Enterococen Agar (MERCK), [cfu/100g of wet sediment]
- most probable number of *Clostridium perfringens* bacteria, using liquid TSC medium in anaerobic conditions [cfu/100g of wet sediment].

Domestic sewage is the main source of *Enterobacteriaceae* (including *Escherichia coli* and pathogenic *Salmonella* genus bacteria), intestinal *Enterococci* and *Clostridium perfringens* bacterial contamination of Gulf of Gdańsk waters. The presence of these bacteria in analysed water and sediments indicates that the examined area is contained within the range of influence of sewage water discharged directly from municipal sewage treatment facilities (Gdańsk and Gdynia) and indirectly from Vistula river.