The corrosiveness of natural water for metallic materials is not only determined by the chemical composition, it is also influenced by microbial activity. Microbially Influenced Corrosion (MIC) may lead to unexpected corrosion damages in technical systems like hydropower plants, pipes, pumps, or heat exchangers. Assessing the MIC risk from water samples is very limited, as are laboratory tests lacking the complexity of the natural environment.

Microbially Influenced Corrosion Risk Assessment buoy (MICRA-buoy) is a device which is placed in the water body of interest for a limited time (few weeks, typically). It carries specimens of metallic materials, which are connected to an integrated acquisition system for electrochemical data. After exposition, data evaluation provides information on the risk of MIC, and the biofilm on the specimens may be investigated.

ADVANTAGES
- Direct assessment of corrosion relevant electrochemical data
- in the original environment with freely selectable materials
- generating authentic biofilm

FURTHER READING
3. Failure cases investigated by P. Linhardt, TU-Wien, CTA (unpublished)