

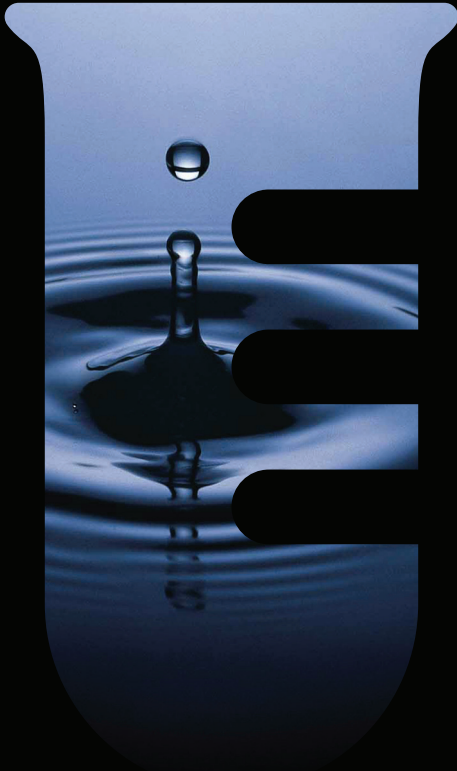


# MORWAQ

MONITORING AND PREDICTING  
WATER QUALITY PARAMETERS



**INESCTEC**  
TECHNOLOGY & SCIENCE



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## MONITORING AND PREDICTING WATER QUALITY PARAMETERS

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INESC TEC has developed models that can be used for monitoring and predicting water quality parameters in the context of water distribution network. These models were developed and tested in the context of the distribution network managed by the company Águas do Douro e Paiva (AdDP), SA. The AdDP conducts regular sampling procedures in different points of the distribution network in order to monitor a set of parameters associated with water quality.

INESC TEC used the data resulting from these sampling procedures conducted for several years. Various models were developed using these data to address two main problems:

- Monitoring the large set of water quality parameters controlled by the AdDP in order to provide early warnings on eventual deviations from the expected "normal" values.
- Predicting the occurrence of extreme values on water quality parameters across the network, with the goal of allowing early preventive actions to be taken to avoid subsequent problems.

### MAIN FEATURES

- Predictive models for forecasting water quality parameters supporting preventive actions that can avoid abnormal values.
- Predictive models to estimate the value of several water quality parameters in different points of the network using information obtained at other geographically correlated points, avoiding costly sampling analyses.
- Models for discovering correlations among water quality parameters.



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