



**ORASECOM**

**JOINT WATER QUALITY BASELINE SURVEY WORKSHOP**

# **Water Quality Survey and Survey Manual**

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# What?



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- **Water quality monitoring as part of the Orange-Senqu Joint Baseline Survey**
- **Piggyback onto Aquatic Ecosystem Health survey programme**
- **Interface with Inter-laboratory study**

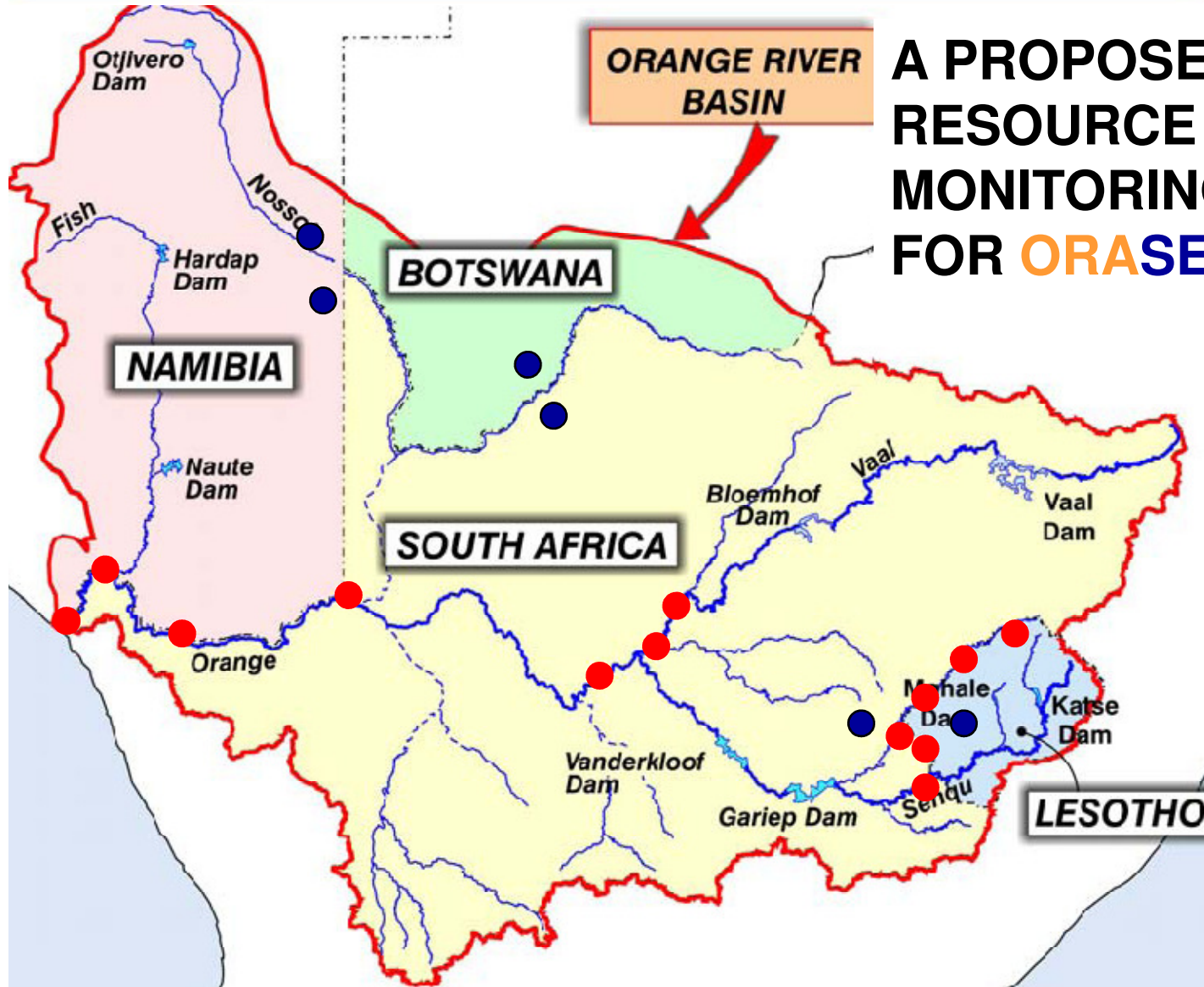




# Where?



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## A PROPOSED WATER RESOURCE QUALITY MONITORING PROGRAMME FOR ORASECOM

- 13 Transboundary surface water sites
- Groundwater sites
- DWA priority monitoring sites





# What?



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## Water quality variables

**Alkalinity (mg/l)**

**EC (mS/m)**

**pH**

**Alkalinity (mg/l)**

**Calcium (mg/l)**

**Chloride (mg/l)**

**Fluoride (mg/l)**

**Magnesium (mg/l)**

**Potassium (mg/l)**

**Suspended sediment (mg/l)**

**Sodium (mg/l)**

**Sulphate (mg/l)**

**Total dissolved solids (TDS) mg/l**

**PO<sub>4</sub>-P (mg/l)**

**Total P (mg/l)**

**NH<sub>4</sub>-N (mg/l)**

**NO<sub>3</sub>-N (mg/l)**

**Total N (mg/l)**

**Si (mg/l)**

 **Chlorophyll a, algal species composition (not for this survey)**

 **Microbial water quality (obtain data from NMMP and others)**





# Who?



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## ● Sampling

- Aquatic ecosystem health teams or country delegates will collect the water samples & undertake in-situ measurements
- In situ measurements: Water temp, EC, pH, DO
- Will use standardised water quality sampling protocols

- Sample preservation
- Sample labeling and preparation for transport
- Will deliver samples to a collection point





# Who?



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- **Sample analysis**
  - **Courier will collect samples and deliver them to one central laboratory, WaterLab, in Pretoria**
  - **Chemical sample analysis**
  - **Analysis results**
    - **Submit to ORASECOM Secretariat**





# When?



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- **Sampling programme**
  - **Align with Aquatic Ecosystem Health monitoring programme**
  - **Align with Inter-laboratory study**
  - **October/November 2010**  
Groundwater sites
  - **Reporting –November / December**
  - **Summary report – January/February 2011**





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# DISCUSSION

