

Monitoring South African ocean's water quality: An OGC SensorThings Application

Geospatial Sensing | Virtual 2020

Derek Hohls

Senior Systems Developer

Council for Scientific and Industrial Research

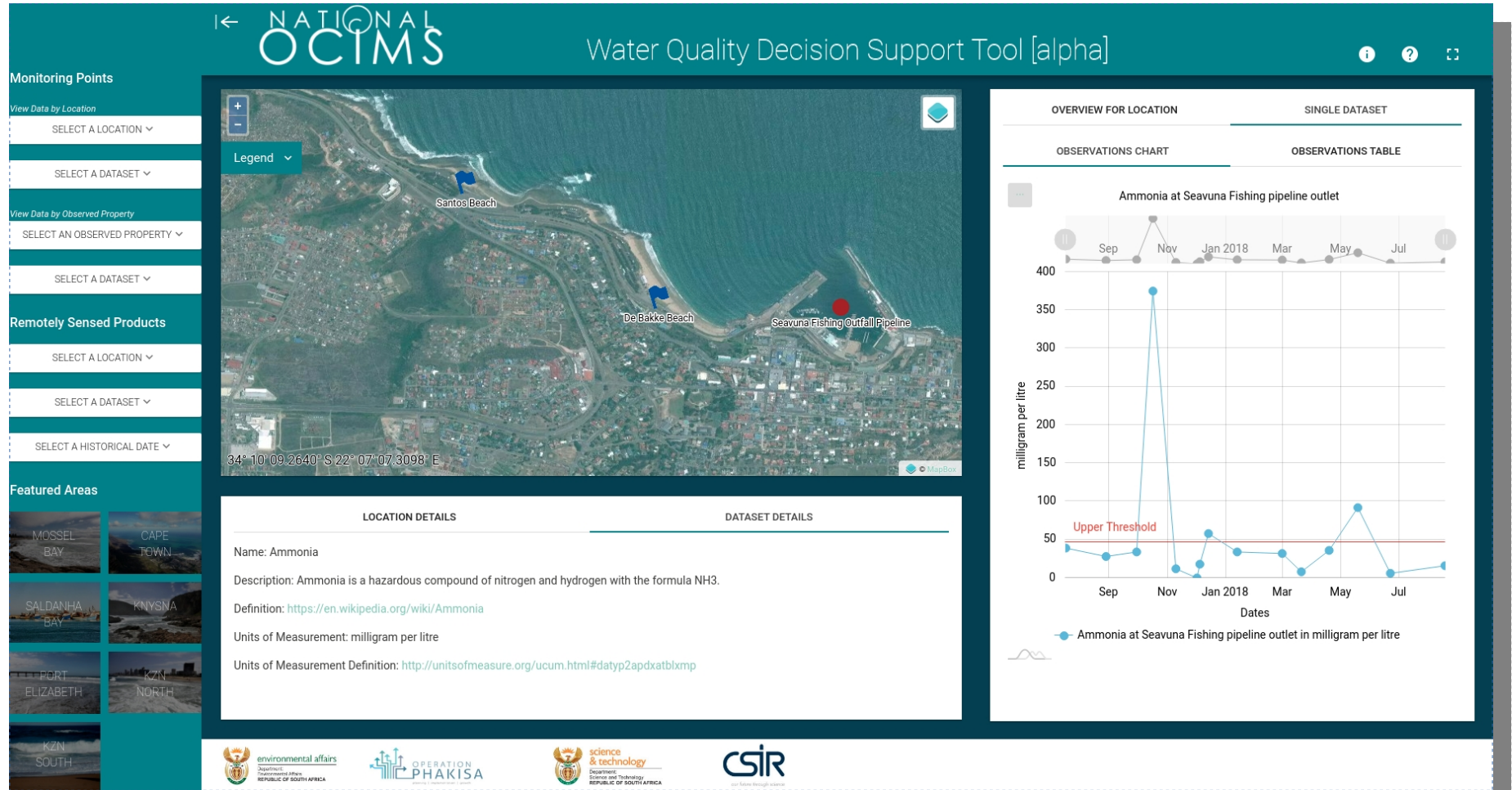
www.csir.co.za

DHohls@csir.co.za



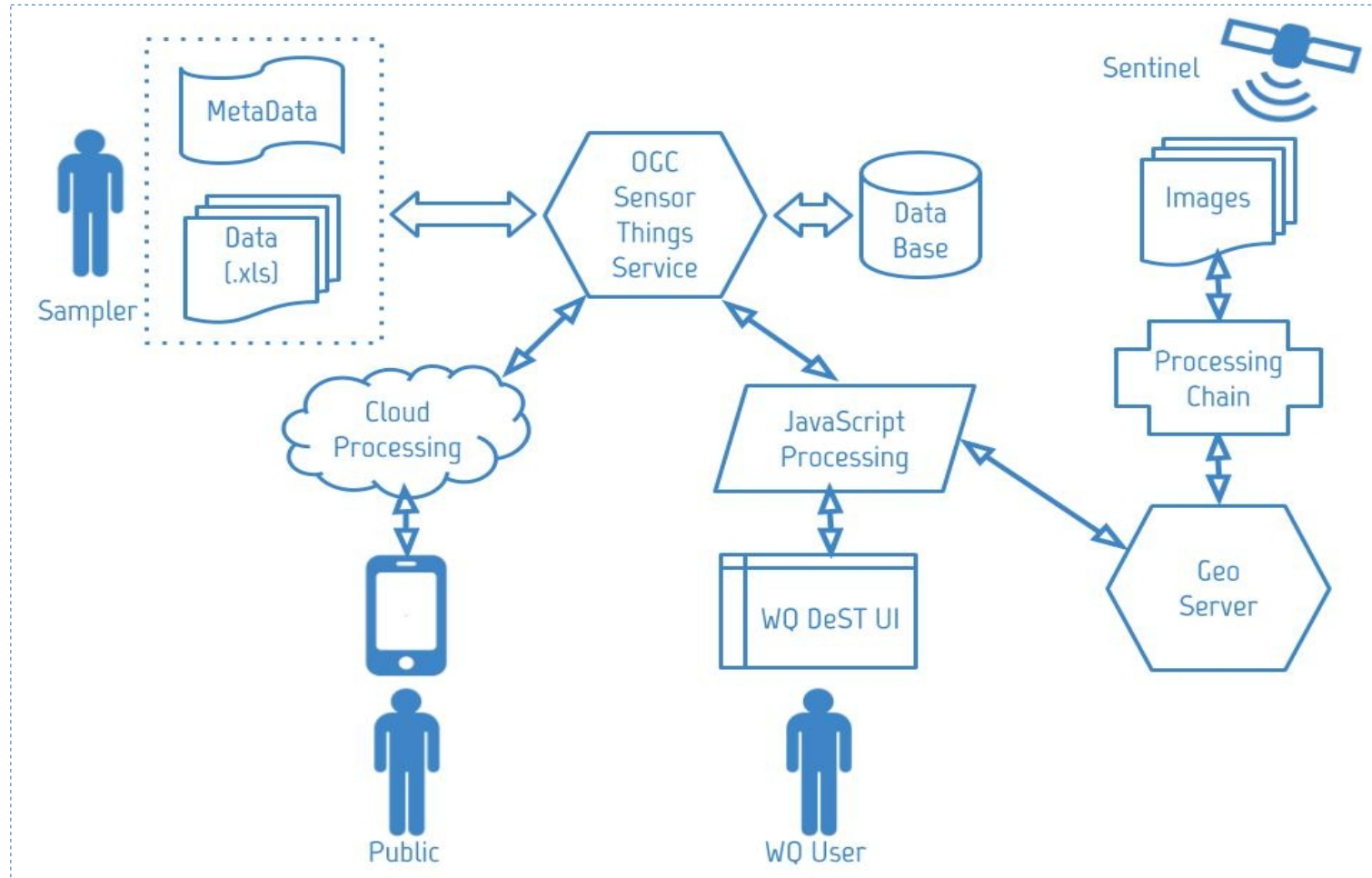
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Water Quality Monitoring: User Interface



<https://www.ocims.gov.za>

Water Quality Monitoring: Concept



Water Quality Monitoring: Data & Flow

Data Elements: Metadata for each of: datastreams, properties, sensors, units & things

Datastream

```
{  
  "name": "WESSA:Blueflag:uMtoti:Escherichia_coli",  
  "description": "Escherichia coli at uMtoti Beach",  
  "unitOfMeasurement": "cfu per 100mL",  
  "observationType": "OM_Measurement",  
  "ObservedProperty": "Escherichia coli",  
  "Sensor": "WESSA:Blueflag:uMtoti:WaterSample",  
  "Thing": "WESSA:Blueflag:uMtoti:Survey"  
}
```

Thing (partial)

```
"name": "WESSA:Blueflag:uMtoti:Survey",  
"description": "uMtoti Beach Blueflag Survey",  
"properties": {  
  "category": "Pilot",  
  "reference": "Blue Flag",  
  "organisation": "WESSA",  
  "status": "Inactive",  
  "client": "Ethekewini",  
  "location_type": "Beach",  
  "type": "Survey"
```

Data Flow:

- Processor runs a *"pipeline"* that calls *"loaders"* - one per monitoring programme - each inheriting from a common generic class.
- Each loader is configured so that monitored data (Excel) & JSON metadata can be parsed.
- A generic *"sensorthings_client"* handles all requests to/from the actual **SensorThingsAPI**.

Thank you!

