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Reflections on EMODnet
from the perspective of
collaborative international environmental assessment practice

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Oostende – 20 October 2015

Flanders support for EMODnet

- General policy being developed to stimulate Open Access and Open Data, in consultation with all relevant stakeholders
- Specifically: commitment to hosting of the EMODnet Secretariat at *InnovOcean* site in Ostend, co-located with VLIZ that set up the EMODnet central portal.
- VLIZ is living proof that accessible data infrastructures are a vital component of today's support for marine science and technology developments
- Flanders support for the IOC's *International Oceanographic Data and Information Exchange (IODE)* programme, with its project office in Ostend, is further witness to this endeavour.

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Personal experience and perspective

- **North Sea Conferences** and **OSPAR Commission**
  - **1993** North Sea Quality Status Report
  - **2000** OSPAR Quality Status Report (5 Regions + overall)
  - **2010** OSPAR Quality Status Report
  - **2011-2014** development of OSPAR 'common indicators'
- **EU Marine Strategy and Marine Strategy Framework Directive**
  - **2005-2009** in DG ENV: MSFD, European Marine Monitoring and Assessment (EMMA) group with EEA, later WG DIKE; links with 'Marine Knowledge 2020' development …
- **… what do the data *mean* for the course of environmental policy, is it working?**

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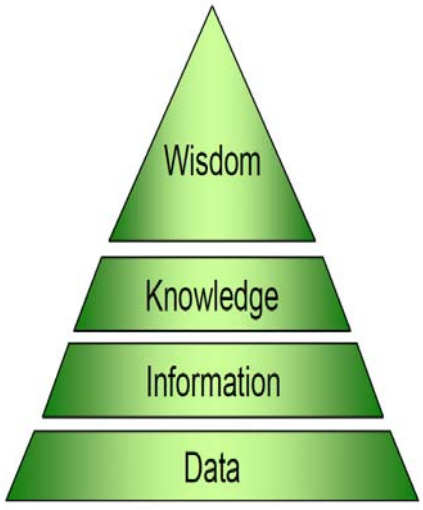
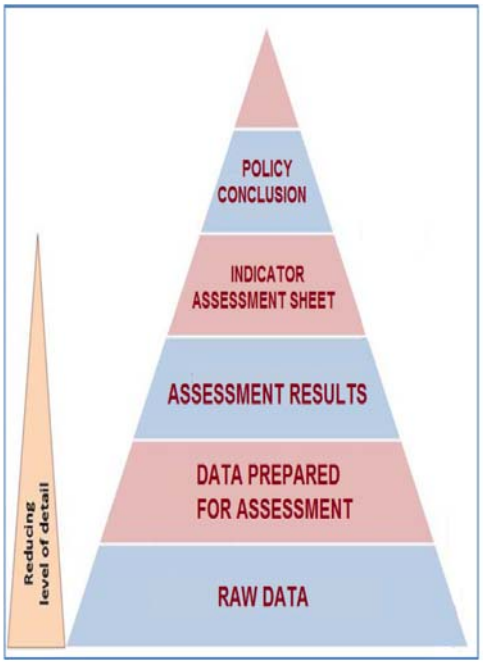


Figure 3: DIKW Model



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Formative experience – early 1990s

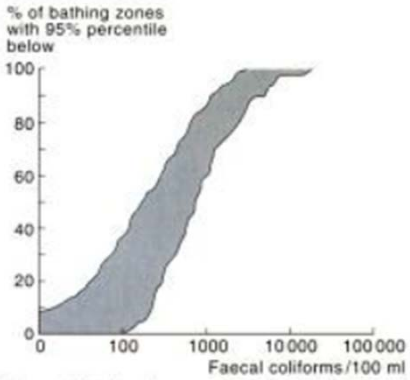


Figure 5·8. Envelope of cumulative graphs of 95 percentiles (upper extreme tendency) for faecal coliform concentrations (per 100 ml) in sea water, in Subregions 3a, 3b, 4, 9, and 10.

Lessons learnt:

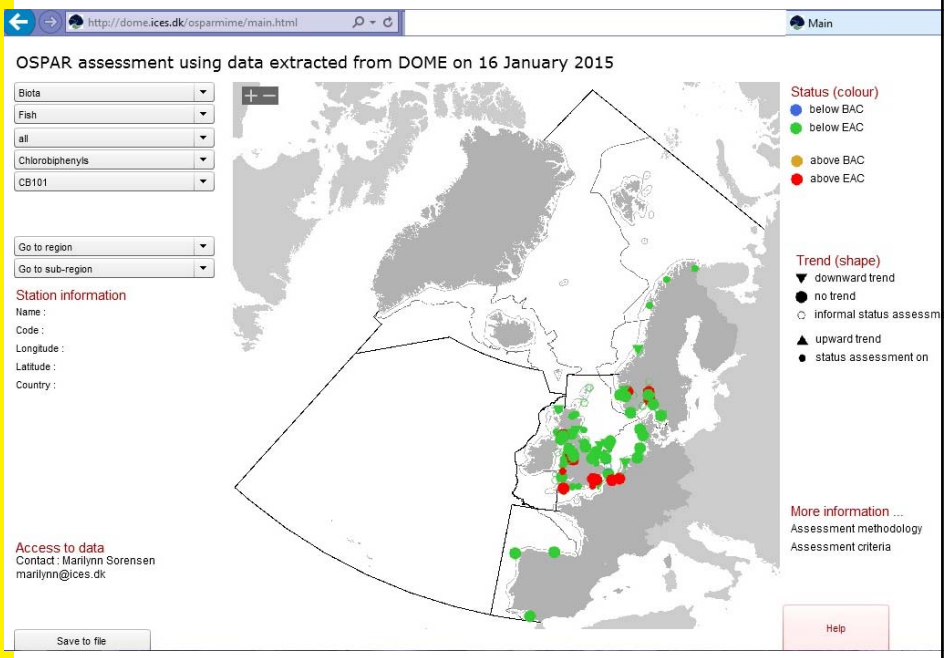
- Using/pooling data from different sources requires full and continuous attention to methods and QA
- Data providers don't necessarily appreciate the potential benefits from wider use of their data and/or more contextualisation
- Great sensitivity around data as arguments in a policy context.

Activities in a joint monitoring programme

- Shared platforms
- Shared equipment
- Joint training programmes
- Joint planning meetings
- Joint programme management
- Inter-organisation personnel exchange
- Inter-organisation calibration studies
- Shared data infrastructure (e.g. databases)
- Shared assessment procedures
- Joint assessments
- Joint reporting
- Joint funding mechanisms
- Joint resource allocation

Source: Dr Jo Foden, OSPAR

OSPAR COMMISSION



OSPAR data assessment practice

- Dedicated teams – this ensures a mix of 'data providers' and 'data/information users' in the same process
- Assessment reports (QSR) – combine updated assessment of recent monitoring data and wider scientific information sources
- Modular approach – MSFD made OSPAR move towards more standardised 'indicator' development and use
- Alignment across themes under Joint Assessment and Monitoring Programme – supported by new tools and data systems, 'ODIMS'

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OSPAR JAMP: stresses feedback loop

"Assessments […] provide the drivers of the monitoring and information collection needed. The delivery of assessments will be used by the OSPAR Commission and its subsidiary bodies as an **opportunity to provide feedback on the level and quality of marine environmental knowledge** so as to guide the management of coordinated monitoring programmes, identify gaps in knowledge (see OSPAR Science Agenda) and inform related research and development."

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OSPAR Joint Assessment and Monitoring Programme 2014-2021, Annex 1, § 7

Example of improvement through Joint programme management

- Periodic assessment process towards publication:
  - Earlier: every 3-5 years
    - Problem: too much data rejected for QA reasons, problem in e.g. QSR 2000
  - Currently: ANNUAL process
    - Problem **solved**: Intensive check on data quality through the entire process, much higher (> 90%) data use rate

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Data as bedrock of value creation

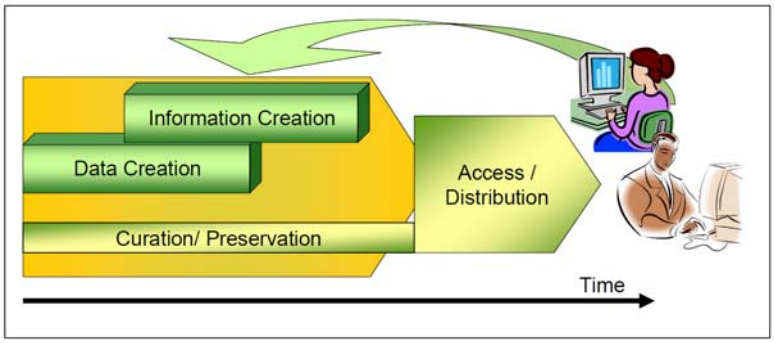

Figure 2: Information Value Creation Process

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Source: Science-Data for Preservation – Earth Sciences (SCIDIP-ES) Report Deliverable 31.1, © ESA, 2011

Tendency that data users are progressively further away from the data creators → traceability is key

- Metadata sets are crucial to document (what are the data, how were they obtained, how was the data product put together,…)
  - → Examples where there is an interest but there are difficulties using the EMODnet data 'as is' for e.g. OSPAR assessments e.g. biodiversity
- Ideally EMODnet should strengthen the links between data providers and data users, not weaken them. More than 'inform', install a regular dialogue between data providers, portals and the data user communities

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Official use → data have to conform to standards of agreed monitoring programmes

- One should be able to subject data in EMODnet to all necessary scrutiny (QA validation) before use in assessment procedures, regardless whether from official monitoring or collected otherwise
  - → Example contaminants data in Chemistry portal
- EMODnet can help strengthen availability to third users of data already collected for the purpose of international assessment procedures, and help generate additional benefits from those data

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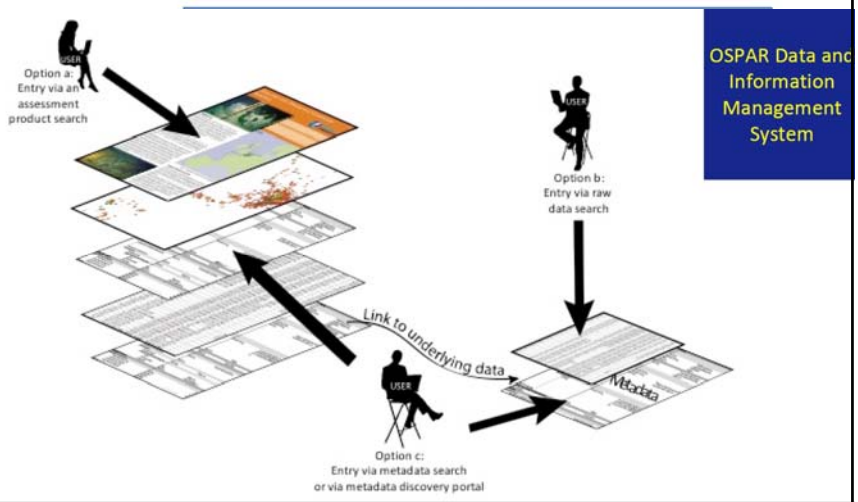
Multiple entry points to the pyramid



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Governance

- Ensure all parties have clear roles…
- Costs and benefits are not automatically equally well spread, benefits should increase faster than costs…
- So make sure that benefits accrue also to data providers, and that potential data users understand they need to contribute (give something back)

$$Value = \frac{Benefits}{Cost}$$

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Some current challenges

- Timeliness – Too long time between 'sample/observation' and final assessment result… technology could help speed this up.
- Finding the right incentives for joint monitoring
- Establishing mutually beneficial linkages with neighbouring communities such as those dealing with 'operational oceanography', 'marine surveillance' (human pressures data) and 'research infrastructures' (e.g. innovation in methods).

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One of the World Ocean's Day (8 June 2015) key messages to COP UNFCCC Paris:

"Innovation in monitoring threats to the ocean and reducing additional cumulative impacts from pollution and shipping are key to sustainably use

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EMODnet... or emodNET!