



UNITED NATIONS  
Office for Outer Space Affairs

**WMO/OGC  
Ninth Hydrology DWG Workshop  
2018**

**Data Sharing at UNOOSA**

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# Content

- UNOOSA and Open Data
- Open Data Advocacy
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- Data Exchange
- Taxonomies / Ontologies
- Standards
- Open Source
- Problems / Questions / Perspective



# UNOOSA and Open Data

- United Nations Geographic Information Working Group (UNGIWG) has been a principle OGC Member since 2012
- UNOOSA has been a UNGIWG member for 18 years, 7 years as a Chair





# UNOOSA & Open Data

- No data producer,
  - but advocating Open Data
    - in front of the private sector and states
  - sharing data in form of catalogues to provide overview, as a service and also as a way of capacity building
- GEOSS Portal (Meta-) Data Provider (May 2018)
- Main problem: maintenance!
- Need for automation.



# Open Data Advocacy - Fields

- Lobbying for Access to Open Data (on request)
  - **Early warning & Emergency Response**
  - Resource management
  - Environmental protection



# Open Data Advocacy - States

- Access to Open Data (on request)
  - MOUs with
    - China
    - Italy
    - Israel
- Access to Open Data in case of emergency only
  - so far informal agreements with
    - Mohammed Bin Rashid Space Centre (UAE)
    - Geo-Informatics and Space Technology Development Agency (GISTDA, Thailand)



# Open Data Advocacy – Private Sector

- MOUs
  - Digital Globe – instrumental in having the Open Data Initiative started
  - Airbus
- Negotiations for MOUs
  - Planet
  - ICEYE
  - and others



# Data Exchange



- Software
- Institutions
- Recommended Practices, Capacity Building and Training
- News
- Emergency Response Resources





“Our collaboration is working to deliver programmatic activity connecting the global water management community to the space sector”

- Simonetta Di Pippo, 2018.



# Data Exchange

REST API (JSON/XML Standard)

Stakeholders

Software

Initiative  
- Mission -  
Community

Training  
Material  
- MOOC -  
SPOOC

Publications

?  
Metadata on  
Datasets

News  
- Article -  
(Success) Story

Event  
- Conference -  
- Workshop -  
Training

Taxonomies

- Import/export requirements evaluation necessary



# Taxonomies/Ontologies

Thematic Focus

Space Technologies

Water  
- Hydrology -  
- Water Management -

Software Funcionality

Algorithms  
- Indices

- For classification
- As glossary for capacity building
  - definitions from various perspectives needed



## Standards (to be) used

- Dublin Core, (ISO19115), (WaterML)
  - for Metadata on Datasets
  - UN-SPIDER = GEO Portal data provider
- Space 4 Water Portal will rather promote other data portals than individual datasets.
  - Point Space Agencies to geoportal
  - Integrate Widget or Mirror for Geoportal as Interface



# Standards - Further Evaluation

- Drupal Module development or testing
  - Research Information System Format (RIS) - for publications
  - Asset Description Metadata Schema for Software (ADMS.SW) by the Semantic Interoperability Community (SEMIC, European Commission)
    - How to use this data with the coming upload filters?
- Further „research“ needed
  - Trainings (MIT MoocDB)
  - Events
  - News Stories



# Open Source

- Not only Open Data and Standards
- Also Open Source
- What systems are used by organizations to facilitate data exchange?
- Not a necessity for interoperability
- A way to collaboratively develop
- Take advantage of community / also give back
- OOSA: Uses Drupal as a CMS
  - Might need to develop one or the other module to facilitate data exchange



# Problems / Questions / Perspective

- Not only data/metadata needs to be shared, but also ontologies/taxonomies to put content into perspective and open source code “translate” between standards.
- Ontology/Taxonomy sharing solutions for small projects
- Brokering data for which no standards exists / which is not published using a standard
- Capacity building material needs user experience testing!



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# THANK YOU

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