Distance Learning Course "Interoperable data exchange in hydrology"

REFERENCES		
Lesson 1.1	International Glossary of Hydrology (WMO-UNESCO, 2012)	
	 <u>Water Security – science and management challenges</u> (Howard S. Wheater, 2015) 	
	 Making Every Drop Count (UN DESA & World Bank, 2018). 	
	 Assessment of the State of Hydrological Services in Developing Countries (World Bank, 2018) 	
	Charting Our Water Future (2030 Water Resources Group, 2009)	
	• Economic Losses, Poverty and Disasters 1998-2017 (CRED & UNISDR)	
	 Measuring what we manage – the importance of hydrological data to water resources management (B. Stewart, 2015) 	
	• The Data Value Chain: Moving from Production to Impact (Open Data Watch)	
	 <u>Transboundary Waters: Sharing Benefits, Sharing Responsibilities</u> (UN-Water, 2008) 	
	 <u>Transboundary Waters Assessment Programme (TWAP) River Basins</u> <u>Component</u> 	
	 Policy on the Exchange of Hydrological and Meteorological Data and Information in the Sava River Basin (WMO, 2014) 	
	 Transboundary Cooperation and Sustainable Development in the Rhine Basin (2018) 	
	 Sharing water observations: turning local data into global information (UNESCO, 2013) 	
Lesson 1.2	-	
Lesson 1.3	WMO Unified Data Policy Resolution (WMO)	
	Supporting Development of International Data Exchange Policies (WMO, 2018)	
	 Internet of Water: Sharing and integrating water data for sustainability (The Aspen Institute, 2017) 	
	How to make your data FAIR (OpenAIRE)	
	 <u>Data interoperability: A practitioner's guide to joining up data in the</u> <u>development sector</u> (Luis González Morales & Tom Orrell, 2018) 	
	Open Science Training Handbook: Open Research Data and Materials (GitHub)	
	• E-monitoring the nature of water (Silvano Pecora & Harry F. Lins, 2020)	

REFERENCES		
Lesson 2.1	 <u>Guide to Hydrological Practices</u> (WMO) <u>Manual on Stream Gauging</u> (WMO) 	
Lesson 2.2	 A view-based model of data-cube to support big earth data systems interoperability (Stefano Nativi, Paolo Mazzetti & Max Craglia, 2017) Database Management System (Learn Computer Science) Relational Database (Learn Computer Science) MCH - Meteorology, Climatology and Hydrology Database Management System (WMO) 	
Lesson 2.3	 What are Metadata Standards (DCC, 2007) Geospatial metadata (Wikipedia) ISO 19115-1:2014 - Geographic information - Metadata - Part 1: Fundamentals (ISO) WIGOS Metadata Standard (WMO, 2019) The Data Value Chain: Moving from Production to Impact (Open Data Watch) Designing Transnational Hydroclimatological Observation Networks and Data Sharing Policies in West Africa (Data Science Journal) CUAHSI Ontology RDF 1.1 Concepts and Abstract Syntax (W3C Recommendation, 2014) RDF 1.1 Turtle (W3C Recommendation, 2014) SKOS Core Guide (W3C Working Draft, 2005) SKOS Simple Knowledge Organization System (W3C Recommendation, 2009) LodLive (GitHub) 	
Lesson 2.4	WaterML 2.0 (OGC)	
Lesson 2.5	 Guide to Hydrological Practices (WMO) Manual on Stream Gauging (WMO) Technical Regulations, Volume III: Hydrology (WMO) Manual on Flood Forecasting and Warning (WMO) WIGOS Metadata Standard (WMO, 2019) Data interoperability: A practitioner's guide to joining up data in the development sector (Luis González Morales & Tom Orrell, 2018) 	

REFERENCES		
Lesson 3.1	GWIS JavaScript API (USGS)	
	• <u>Jupyter</u>	
	<u>CUAHSI HydroDesktop</u> (GitHub)	
	Water Data Explorer (GitHub)	
	Water Data Explorer Guide	
Lesson 3.2	Data interoperability: A practitioner's guide to joining up data in the development sector (Luis González Morales & Tom Orrell, 2018)	
Lesson 3.3	The Levels of Conceptual Interoperability Model: Applying Systems Engineering Principles to M&S (2009)	