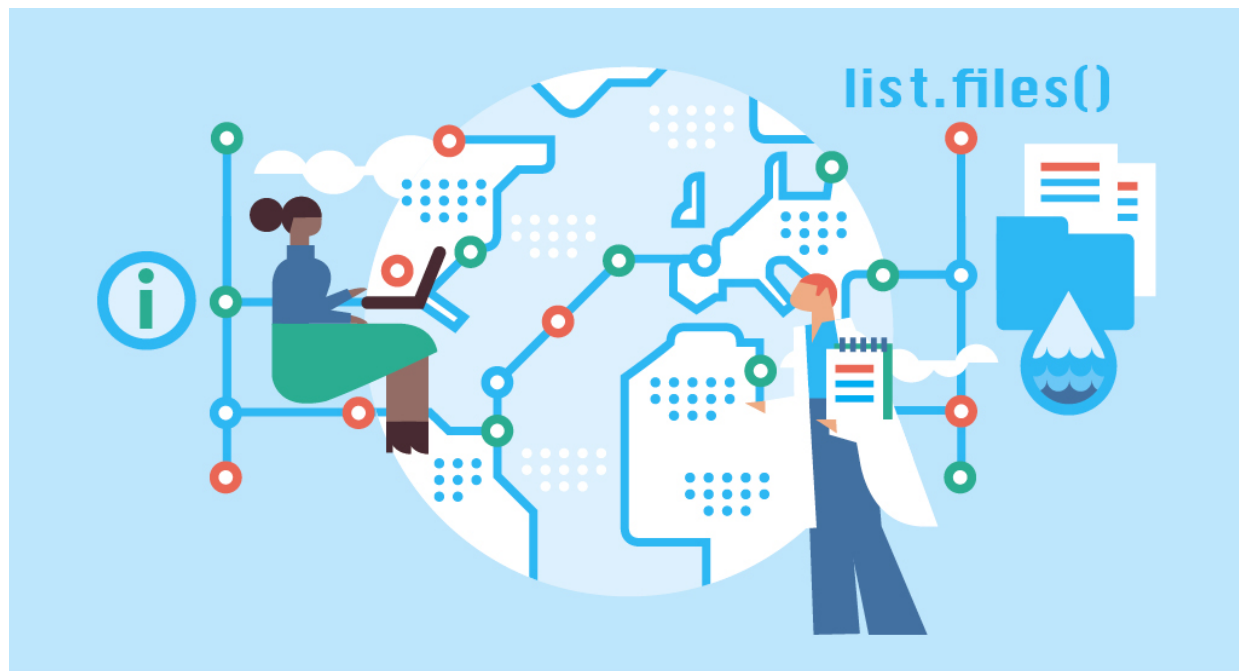


# Open Online Course on Programming for Geospatial Hydrological Applications – Launch Webinar



March 2<sup>nd</sup> 2021 - 14:00-15:30 (GMT+2)

**REGISTER NOW!**

[http://bit.ly/CLiMWaR\\_Webinar\\_Registration](http://bit.ly/CLiMWaR_Webinar_Registration)

The course will be accessible from March 2 onwards and you can enroll at <https://openlearning.unesco.org/>

# About the Course

In this self-paced online course, the participants will be introduced to the Programming for Geospatial Hydrological Applications. Participants will learn an essential skill for researchers dealing with (spatial) data. With scripting participants will be able to better control analysis using command line tools. They can also automate their procedures by writing batch scripts. Furthermore, participants can process their data and make models using Python and its useful libraries.

The course consists of 5 modules each with a set of video lectures and hands-on exercises.

## Target group

The course is designed for professionals (engineers, scientists and other technically oriented people) active in the water/environmental sector, especially those involved in planning and management of water systems as well as modelling. Pre-requisites are a basic knowledge of computing and water related topics..

## Required resources (Software and hardware)

Hardware: Laptop or PC with at least 8GB RAM, mouse, internet connection

Software: QGIS 3.10.x (free download at <http://www.qgis.org>), PCRaster and Anaconda. Installation instructions will be given at online course platform.

## Developed by



United Nations  
Educational, Scientific and  
Cultural Organization



Intergovernmental  
Hydrological  
Programme



United Nations  
Educational, Scientific and  
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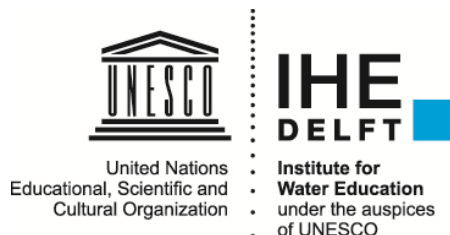


Institute for  
Water Education  
under the auspices  
of UNESCO

# Webinar Programme

Time	Activity
<b>Session Moderator</b>	Dr Koen Verbist, Program Specialist, UNESCO Regional Office for Southern Africa
<b>14:00 - 14:10</b>	<b>Welcome Remarks:</b> Prof. Hubert Gijzen, Director, UNESCO Regional Office for Southern Africa <b>Introductory Remarks:</b> Prof. Eddy J. Moors, Rector of IHE Delft Institute for Water Education
<b>14:10 - 14:20</b>	<b>The Open Water Network: better water resources management by sharing knowledge on water:</b> Dr Ann Van Griensven, Associate Professor of Hydrology and Water Quality and IHP focal point for Belgium
<b>14:20 - 14:55</b>	<b>Overview of the Online course on Programming for Geospatial Hydrological Applications:</b> Dr Hans van der Kwast, IHE Senior Lecturer in Geographic Information Systems and Spatial Data Management
<b>14:55 - 15:15</b>	<b>Open discussion and Q&amp;A Session</b>
<b>15:15 - 15:25</b>	<b>Announcement and launch of the Online Course:</b> Dr Koen Verbist, Program Specialist, UNESCO Regional Office for Southern Africa
<b>15:25 - 15:30</b>	<b>Closing Remarks:</b> Dr Anil Mishra Programme Specialist, Hydrological Systems and Water Scarcity Section (HSS)

## With Support from



# Course Outline

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## Module

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- 1 Introduction to the command line and GDAL
- 2 Introduction to Python
- 3 Python Libraries – Map Algebra with PCRaster
- 4 Spatial Dynamic Modelling
- 5 PyQGIS

## Course Instructor



Hans van der Kwast, IHE Senior Lecturer in Geographic Information Systems and Spatial Data Management

Hans van der Kwast is a physical geographer specialized in GIS and remote sensing. From 2007 to 2012, he worked at the Flemish Institute for Technological Research (VITO) as a researcher in environmental modelling. In 2009 he defended his PhD at Utrecht University on the integration of remote sensing in soil moisture modeling using the PCRaster Python framework. Since 2012 he works at IHE Delft Institute for Water Education. In his teaching and capacity development projects he actively promotes the use of open source software and open data by mid-career professionals from the Global South. He's a board member of the Dutch QGIS User Group and a QGIS certified lecturer. He is also co-author of the book QGIS for Hydrological Applications.