



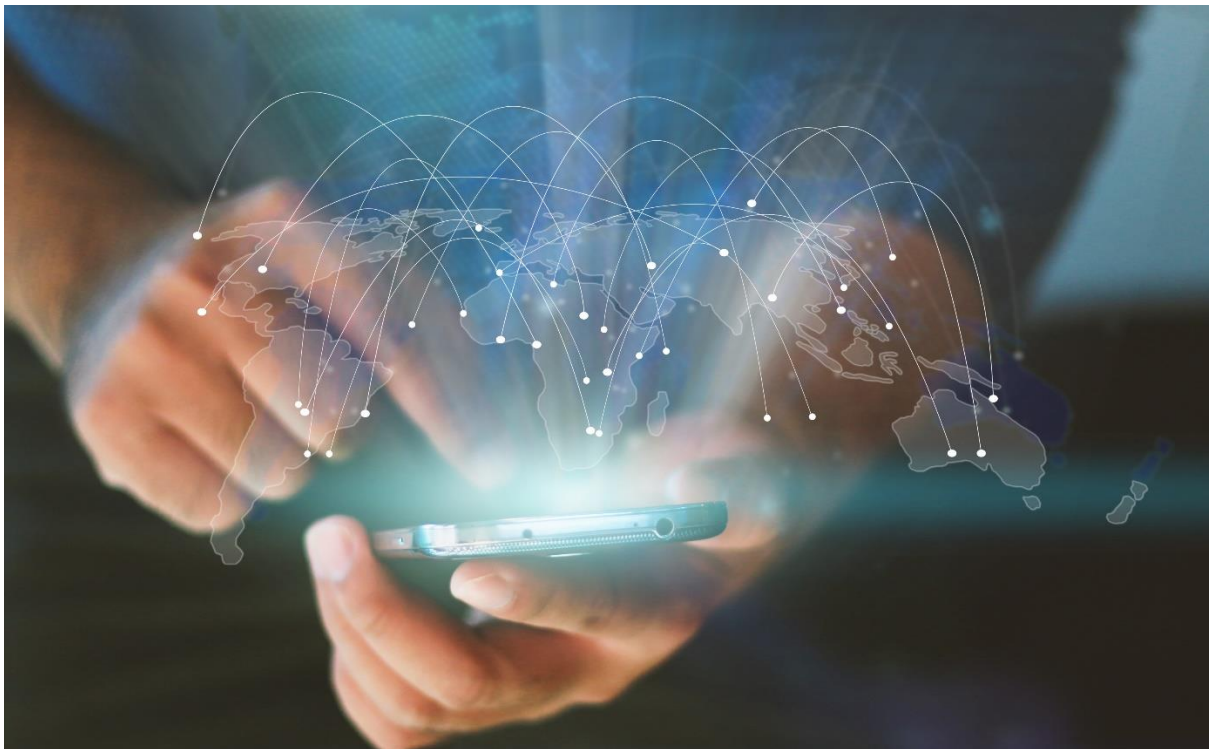
WORLD
METEOROLOGICAL
ORGANIZATION



Distance Learning Course "Interoperable Data Exchange in Hydrology"

21 March – 6 May 2022

Final Report



May 2022



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About the course

The WMO HydroHub recognizes that data sharing is often prevented by the lack of knowledge about basic Information and Communications Technology (ICT) and readily available data exchange standards, WMO regulations and tools. To close this knowledge gap and contribute to the advancement of hydrological data exchange worldwide, the WMO HydroHub has developed and carries out the Distance Learning course "Interoperable Data Exchange in Hydrology".

The Distance Learning course "Interoperable Data Exchange in Hydrology" aims at:

- Raising awareness regarding the importance of international exchange, use and reuse of hydrological data;
- Addressing gaps in the knowledge and technical expertise related to data sharing;
- Introducing and describing the functionalities and implementation processes of the WMO Hydrological Observing System (WHOS).

The course is centred upon [13 required distance learning lessons](#) and structured in four modules. Students are required to complete four online quizzes, one after completing each module. In addition to mastering the course content, students are required to complete a final assignment comprising of five short activities. After successfully completing the course assignment and the online quizzes for each module, the students receive a certificate of completion.

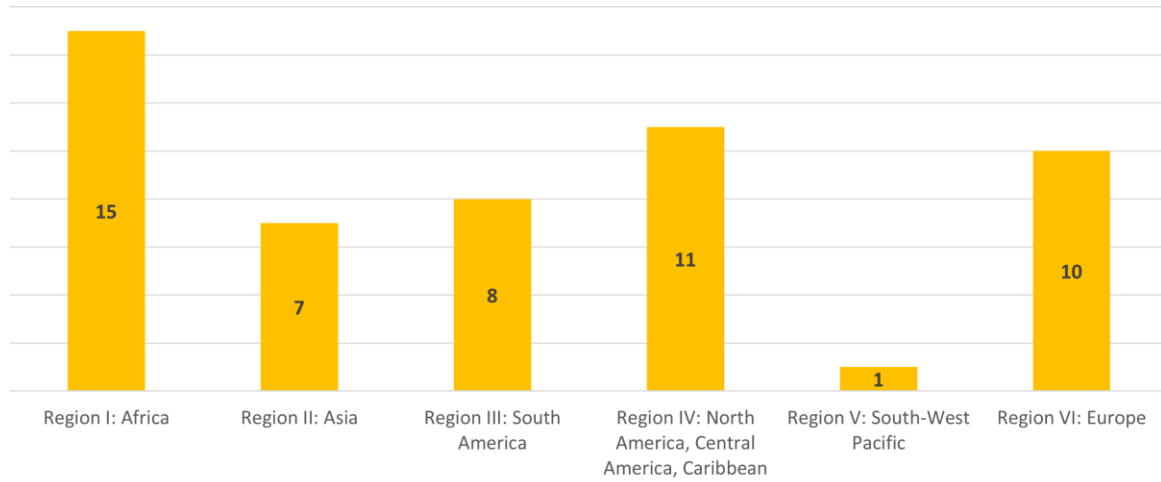
The introductory video for the WMO Distance Learning Course "Interoperable Data Exchange in Hydrology" is available [here](#).

2022 Edition

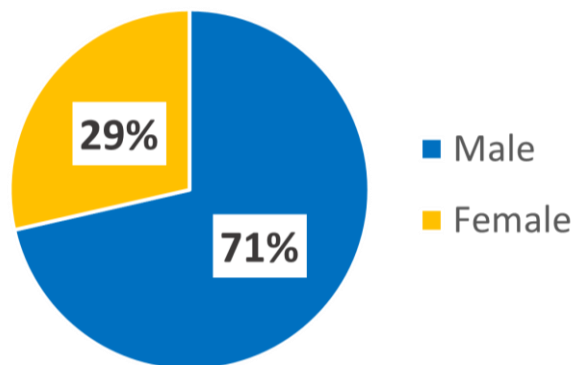
In 2022, the WMO Distance Learning course "Interoperable Data Exchange in Hydrology" took place from 21 March to 6 May, with 105 enrolled participants from 52 countries.



The 52 participating countries are distributed among the WMO Regions as follows:



The gender distribution of the enrolled participants was as follows:



81% of the enrolled participants have successfully completed all the course requirements.

Completion rate

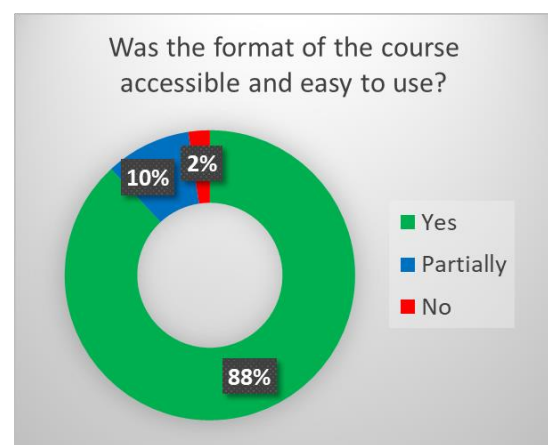
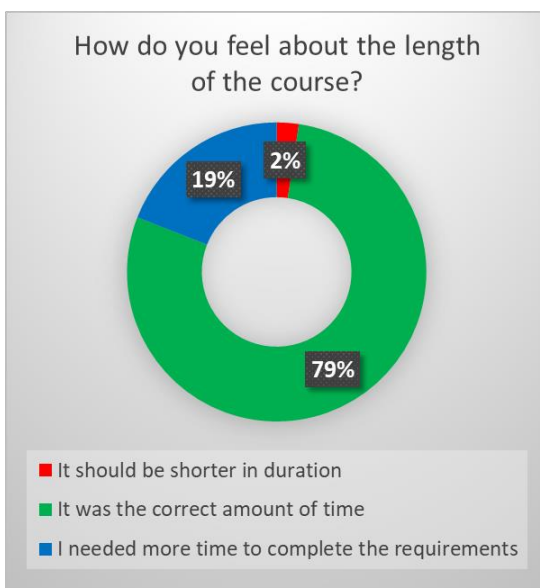
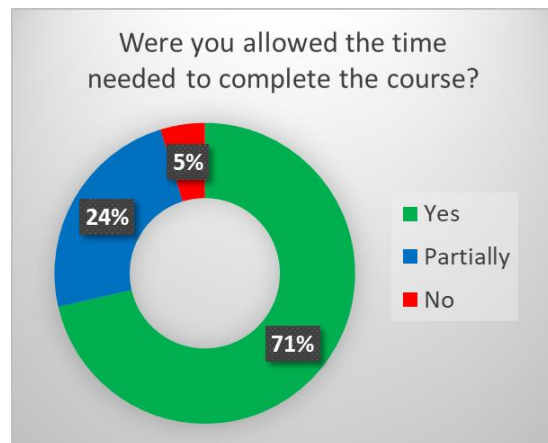
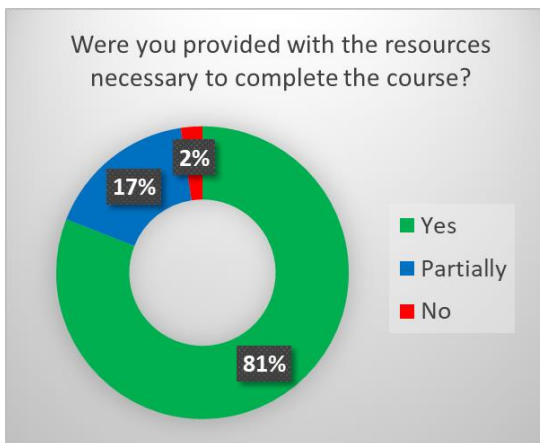
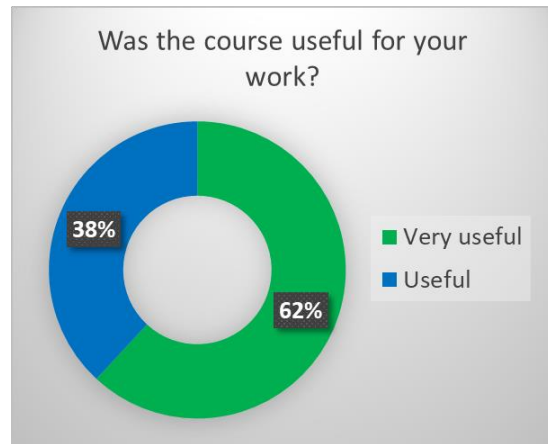
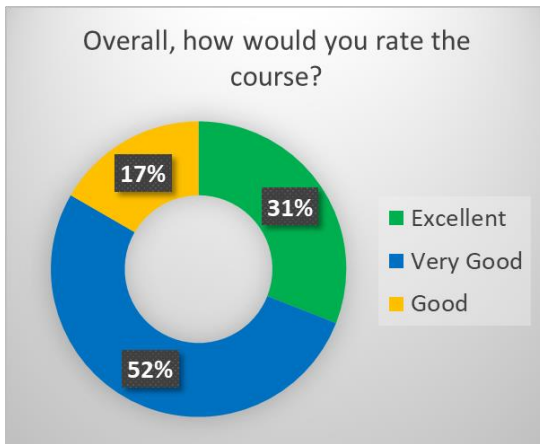
81%

The list of countries, institutions, and number of participants who have successfully completed all the course requirements is available in [ANNEX 1](#).

Throughout the duration of the course, two live webinars were carried out by the course organizers to provide participants with useful information, answer their questions and collect their direct feedback.

Feedback Survey

At the end of the course, all the participants were asked to fill in an anonymous feedback survey. The figures below show the results of the feedback survey, which has been completed by 42 participants.





ANNEX 1: List of countries, institutions, and number of participants who have successfully completed all the course requirements

Country	Institution	Number of Participants
Algeria	Agence Nationale des Ressources Hydrauliques (Alger)	2
Algeria	Hydro-meteorological Institute for Training and Research (IHFR)	1
Argentina	National Meteorological Service	2
Argentina	Instituto Nacional del Agua (INA)	2
Belize	National Hydrological Service	2
Brazil	Brazilian Water Agency	1
Barbados	Caribbean Institute for Meteorology and Hydrology	2
Burkina Faso	Direction Générale des Ressources en Eau	1
Burundi	Geographical Institute of Burundi	2
Canada	Environment and Climate Change Canada	1
Colombia	Institute of Hydrology, Meteorology and Environmental Studies (IDEAM)	2
Comoros	Agence Nationale de l'Aviation Civile et de la Météorologie (ANACM)	1
Congo	Service Hydrologique National	1
Costa Rica	Instituto Costarricense de Electricidad (ICE)	2
Cote d'Ivoire	Société d'exploitation et de développement aéroportuaire, aéronautique et météorologique	2
Denmark	Danish Meteorological Institute	1
Dominican Republic	Instituto Nacional de Recursos Hidráulicos	2
Gambia	Department of Water Resources	2



Country	Institution	Number of Participants
Guyana	Hydrometeorological Service	2
Honduras	CENAO/COPECO	2
Hungary	General Directorate of Water Management	2
India	India Meteorological Department	2
Indonesia	Technical Implementation Unit for Hydrology and Water Environment	1
Iran	I. R. of Iran Meteorological Organization (IRIMO)	1
Italy	Autorità di bacino distrettuale del fiume Po	1
Kazakhstan	RSE Kazhydromet	1
Kenya	Kenya Meteorological Department	1
Latvia	State Ltd "Latvian Environment, Geology and Meteorology Centre"	2
Madagascar	Direction Generale de la Meteorologie	2
Mauritius	Water Resources Unit	2
Moldova	State Hydrometeorological Service	2
Myanmar	Department of Meteorology and Hydrology	2
Namibia	Ministry of Agriculture, Water and Land Reform	2
Nicaragua	Instituto Nicaragüense de Estudios Territoriales (INETER)	2
Paraguay	Entidad Binacional Yacyreta	1
Paraguay	Centro Internacional de Hidroinformatica	1
Portugal	Instituto Português do Mar e Atmosfera (IPMA)	2



Country	Institution	Number of Participants
Russia	Russian Federal State Budgetary Organization “State Hydrological Institute” (SHI)	2
Russia	N.N. Zubov State Oceanographic Institute	1
Saint Lucia	Water Resources Management Agency (WRMA)	1
Senegal	Direction de la Gestion et de la Planification des Ressources en Eau (DGPRE)	2
Serbia	Republic Hydrometeorological Service of Serbia	2
Seychelles	Public Utilities Corporation	2
Slovenia	Slovenian Environment Agency (ARSO)	2
South Africa	Department of Water and Sanitation	2
Syria	Syrian Meteorological Directorate	1
Thailand	Thai Meteorological Department	2
Trinidad and Tobago	Water Resources Agency of Trinidad and Tobago	1
Trinidad and Tobago	Water And Sewerage Authority	1
Tanzania	Tanzania Meteorological Authority (TMA)	2
Uruguay	Dirección Nacional de Aguas - Ministerio de Ambiente	2
Viet Nam	National Centre for Hydro-Meteorological Forecasting (NCHMF)	2
Total		85