



# Data4Water – DELIVERABLE

## Knowledge-lake e-platform

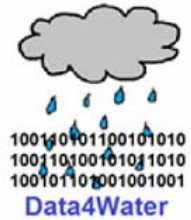
Deliverable number: 5.1

Due date: 1.06.2016

Nature: OTHER

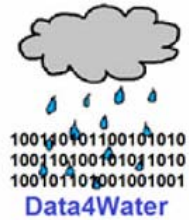
Dissemination Level: CO

Work Package: 5



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## 1. Introduction

Develop a Networking and Knowledge E-Environment, "Knowledge-lake" to support both networking activities and storing, promotion and research for information and knowledge relevant to the research topics in the field of SDWM. It has a major impact on the dissemination of the project activities, as well as of related scientific events and research results in the research field.

This environment is the virtual meeting place of all members of the network that supports intelligent information storage, search and retrieval of: research papers of staff and PhD students in the network, PhD thesis, SDCR relevant national, European and international projects, pointers to companies doing relevant research in the domain, targeted funding opportunities, plus pointers to: sites containing information on European projects; sites containing information on partner opportunities; gateways to science information and publications; sites that offer ratings and evaluations of universities, sites offering ratings of conferences and scientific events.

It will ease the contact between persons and/or organizations, on specific topics. At the same time, it will allow every interested person to be informed about the latest results/achievements/events.

Knowledge-lake will allow different access to information, from public to classified, based on a multi-level user account system. Knowledge-lake will facilitate the rapid access to most of the on-line resources related to networking and partnership opportunities from a central point. The network utility will be much broader than the scope of the project and UPB staff utilization; it will be accessed by scientists from Romania and Europe at large.

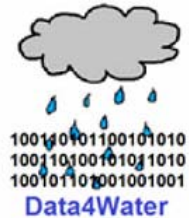
The Knowledge-lake will host the federation of web sites of specific events, in order to make them accessible to the entire community of SDWM. The activities in this task will strengthen the both the scientific level of UPB staff, by permanent contact to the latest results in the field as, well as the direct contact to stakeholders, and the interlinking capacity, due to the dedicated networking e-environment.

The "Knowledge lake" web site was implemented as a bidirectional connection with the project web site <https://d4w-twinn.pub.ro/> .

The "Knowledge lake" site is functional from the 3rd Month of the project, and is constantly updated and maintained, to reflect the current status of the project activities and results.

The "Knowledge lake" site can be accessed at: <http://data4water.pub.ro/>

Project office: University Politehnica of Bucharest, Department for Computers, Room ED402,  
Tel: +40.21.4029646, E-mail: d4w@cs.pub.ro



## 2. The structure of the "Knowledge lake" site

The "Knowledge lake" site has a structure, which offers different portlets depending on the type of the user which uses the interface (guest or administrator). The following portlets are available:

### 2.1 Navigation

This portlet offers rapid links to the principal sections of the site, if the user is the guest it has the possibility to access the following sections/facilities:

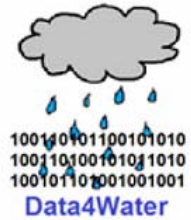
- Site news (allows you to see news on the site)
- Knowledge-lake structure (containing the principal sections):
  - News
  - Our Project
  - Events
  - Scientific resources

If the administrator is authenticated, he will be able to access the following sections/facilities:

- Dashboard (allowing you to access all elements from the principal sections)
- Site pages (containing the principal sections):
  - Site blogs (allows you to access the site blogs)
  - Site badges (allows you to access the site badges)
  - Tags (allows you to search inside the site by using tags or custom keywords)
  - Calendar (allows you to view the calendar events or to add a new event)
  - Site news (allows you to see or add news on the site)
- My courses (allowing you to access all elements from the principal sections)

### 2.2 Calendar

This portlet allows guest users to see the calendar events and if the user is the administrator, then it will offer the possibility to add new calendar events.



## 2.3 My Courses/Knowledge-lake structure

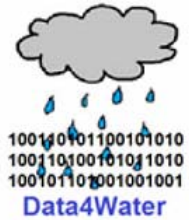
This portlet offers the possibility to access the sections of the site, the portlet has the same function but different names depending on the connected site, (for administrator: My Courses; for guest: Knowledge-lake structure)

## 2.4 Administration

This portlet is available for the administrator and offers administrative features like editing pages, editing site and page settings; administer user access using filters and reports and creating backups and restoring backups.

In the following figures we can see the website interfaces for administrator (Fig. 1) and guest (Fig. 2).

Fig. 1. The website interface for administrator



← → C data4water.pub.ro

DATA4WATER You are not logged in. (Log in)

**NAVIGATION**

- Home
- Site news
- Knowledge-lake structure


**TEST**

Do you want to participate


Yes (3)

Maybe (0)

No (0)



This project is funded by the European Union



**KNOWLEDGE-LAKE**

Call: H2020-TWINN-2015  
Topic: H2020-TWINN-2015  
Type of action: CSA  
Project number: 660900  
Proposal acronym: DATA4WATER  
Project website: <https://d4w-twinn.pub.ro>

**KNOWLEDGE-LAKE STRUCTURE**

- News
- Our Project
- Events
- Scientific resources
- All courses ...

**CALENDAR**

May 2016

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

**Site news**

**SUMMER SCHOOL - Cyber Flow**  
by SIMA-Oana ANTON - Tuesday, 24 May 2016, 3:35 AM

Dear all,

We are pleased to announce that we will be organizing the first Summer school on Intelligent Metering and Big Data in Hydrominformatics in 2016 from the 21st June to the 8th July. This summer school is organized with the help of researchers and experts from University Politehnica of Bucharest, UNESCO-IHE Institute for Water Education, University of Iowa, and Università Degli Studi Di Milano-Bicocca.

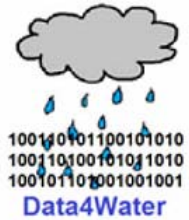
We are now accepting applications, please see below for more information.

[Announcement-SummerSchool.pdf](#)

Fig. 2. The website interface for guest

## 2.5 Access policies

The access on Knowledge Lake platform is permitted as a guest only for general information sections and with an user account and a password for the rest of the site.



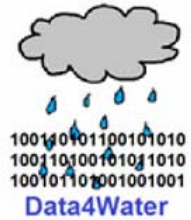
DATA4WATER

- News
- Our Project
  - Data4Water Project (with head icon)
  - Work packages (with head icon)
  - Deliverables (with head icon)
  - Detailed activity plan (with head icon)
  - Financial information (with head icon)
  - Project Gantt Chart (with head icon)
  - Milestones (with head icon)
- Events
  - Kickoff Meeting (with head icon)
  - Networking event (with head icon)
  - Scientific event (with head icon)
  - Workshop (with head icon)
  - Summer school (with head icon)
  - Training (with head icon)
  - Staff exchange (with head icon)
- Scientific resources
  - Project proposals (with head icon)
  - Information materials (with head icon)

As seen in the image above, the sections that have a “head” icon is accessible for everyone and all the others are accessible only for authenticated users.

For authenticated users there are two type of accounts:

- Read-Write accounts which can modify any page of the site (each member of the project has this type of account)
- Read-Only account which can only view the information and post questions on the associated forums.
- Student accounts for different training sessions: a student account can use the associated forums and also can submit different assignments and then can receive a grade based on his submission



### 3. Principal sections of the site

The site contains the following principal sections:

- News
- Our Project
- Events
- Scientific resources

The home page presents the site news and the structure of the Knowledge-lake, Fig. 3 depicts this page:

DATA4WATER Silvia-Oana ANTON

**NAVIGATION**

- Home
  - Dashboard
  - Site pages
  - My courses

**ADMINISTRATION**

- Front page settings
  - Turn editing on
  - Edit settings
- Users
- Filters
- Reports
- Backup
- Restore
- Question bank
- Site administration

**TEST**

Do you want to participate

Yes

No

Maybe

[Responses](#)

**KNOWLEDGE-LAKE**

Call: H2020-TWINN-2015  
Topic: H2020-TWINN-2015  
Type of action: CSA  
Project number: 690900  
Proposal acronym: DATA4WATER  
Project website: <https://d4w-twinn.pub.ro>

**Site news**

**SUMMER SCHOOL - Cyber Flow**  
by Silvia-Oana ANTON - Tuesday, 24 May 2016, 3:35 AM

Dear all,

We are pleased to announce that we will be organizing the first Summer school on Intelligent Metering and Big Data in Hydroinformatics in 2016 from the 21st June to the 8th July. This summer school is organized with the help of researchers and experts from University Politehnica of Bucharest, UNESCO-IHE Institute for Water Education, University of Iowa, and Università Degli Studi Di Milano-Bicocca.

We are now accepting applications, please see below for more information.

[Announcement-SummerSchool.pdf](#)

[Edit](#) | [Delete](#)  
[Discuss this topic](#) (0 replies so far)

**MY COURSES**

- Data4Water Project
- Work packages
- Deliverables
- Detailed activity plan
- Financial Information
- Project Gantt Chart
- Milestones
- Kickoff Meeting
- Networking event
- Scientific event
- Workshop
- Summer school
- Training
- Staff exchange
- Project proposals
- Information materials
- Research results
- References to articles
- Related literature

[All courses ...](#)

**CALENDAR**

May 2016

Sun	Mon	Tue	Wed	Thu	Fri
1	2	3	4	5	6
8	9	10	11	12	13
15	16	17	18	19	20
22	23	24	25	26	27
29	30	31			

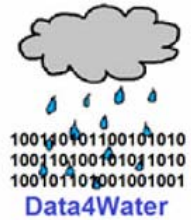
**KPI Deliverable has been accepted**  
by Mariana Inela Mincanu - Monday, 14 March 2016, 1:53 PM

Fig. 3. Home Page

In the next section the contents of each page is presented (some pages are not yet filled with content, the content being added during the project):

Project office: University Politehnica of Bucharest, Department for Computers, Room ED402,  
Tel: +40.21.4029646, E-mail: [d4w@cs.pub.ro](mailto:d4w@cs.pub.ro)





### 3.1 News

This section contains information about the news, which is posted to the site.

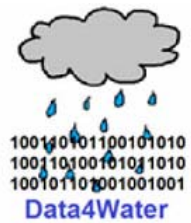
### 3.2 Our Project

The Our Project section is composed by the following pages:

- Data4Water Project (contains information about the project, partners in the project and personnel)

Fig. 4. Data4Water Project

- Work packages (contains information about the work packages of the project, the objectives of each WP and description of work)



DATA4WATER Silvia-Oana ANTON

**NAVIGATION**

- Home
- Dashboard
- Site pages
- Current course
  - WPs**
    - Participants
    - Badges
    - General
    - WP1 Development of the framework for scientific st...
    - WP2 - Partnership & networking
    - WP3 - Training
    - WP4 - Organization of scientific events
    - WP5 - Dissemination of Project Outcomes
    - WP6 - Project management
  - My courses

**ADMINISTRATION**

- Course administration
  - Turn editing on
  - Edit settings
- Users
- Filters
- Reports
- Grades
- Outcomes
- Badges
- Backup

News forum

### List of Work Packages

List of work packages

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#### WP1 Development of the framework for scientific strategy enforcement

**Objectives**  
Develop and implement a suitable, stable and sustainable framework for the scientific strategy enforcement in the research field of value added, data driven e services in water management;  
Develop a Research Quality Assurance System (RQAS) that will allow benchmarks' setup for increasing the Composite Research Indicator and monitor its evolution in time

**Description of work** The lead partner is the coordinator, UPB, assisted by all the partners in rolling out the activities and delivering the deliverable.

WP1 Development of the framework for scientific strategy enforcement

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#### WP2 - Partnership & networking

**Objectives**  
WP2 aims to create a link between the Romanian research group in the field of SDWM and the internationally-leading research institutions, as well as to encourage and enhance the networking of the Romanian research group with other research intensive institutions in Europe, industry specialists, public authorities, and institutions that regulate critical resource management.

**Description of work**

**MY COURSES**

- Data4Water Project
- Work packages
- Deliverables
- Detailed activity plan
- Financial information
- Project Gantt Chart
- Milestones
- Kickoff Meeting
- Networking event
- Scientific event
- Workshop
- Summer school
- Training
- Staff exchange
- Project proposals
- Information materials
- Research results
- References to articles
- Related literature
- All courses ...

**SEARCH FORUMS**

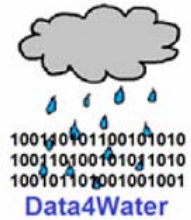
[Advanced search ?](#)

**LATEST NEWS**

Add a new topic...

Fig. 5. Work packages

- Deliverables (contains links to the deliverables of the project in .pdf format)



data4water.pub.ro/course/view.php?id=8

DATA4WATER Silvia-Oana ANTON

**NAVIGATION**

- Home
- Dashboard
- Site pages
- Current course
  - Deliverables**
    - Participants
    - Badges
    - General
    - WP1 Deliverables
    - WP2 Deliverables
    - WP3 Deliverables
    - WP4 Deliverables
    - WP5 Deliverables
    - WP6 Deliverables
    - Topic 7
  - My courses

**ADMINISTRATION**

- Course administration
  - Turn editing on
  - Edit settings
  - Users
  - Filters
  - Reports
  - Grades
  - Outcomes
  - Badges
  - Backup
  - Restore
  - Logout

Forum ştiri

**List of Deliverables**

- List of Deliverables
- D1.5 - KPI Deliverable

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**WP1 Deliverables**

**Objectives**  
Develop and implement a suitable, stable and sustainable framework for the scientific strategy enforcement in the research field of value added, data driven e-services in water management:  
Develop a Research Quality Assurance System (RQAS) that will allow benchmarks' setup for increasing the Composite Research Indicator and monitor its evolution in time

**Deliverables**  
**D1.1** Technology survey: Prospective and challenges: [month 7]  
**D1.2** Roadmap of the research team in SDWM: [month 7]  
**D1.3** Research QA Handbook [month 17] (that will include a preliminary Research Quality Report)  
**D1.4** Research Quality report [month 36]  
**D1.5** Statement regarding the update of the Participant Portal [Month 2]

- D1.5 Statement regarding the update of the Participant Portal [Month 2]
- D1.1 Technology survey: Prospective and challenges: [month 7]
- D1.2 Roadmap of the research team in SDWM: [month 7]
- D1.3 Research QA Handbook [month 17]

**MY COURSES**

- Data4Water Project
- Work packages
- Deliverables
- Detailed activity plan
- Financial information
- Project Gantt Chart
- Milestones
- Kickoff Meeting
- Networking event
- Scientific event
- Workshop
- Summer school
- Training
- Staff exchange
- Project proposals
- Information materials
- Research results
- References to articles
- Related literature
- All courses ...

**SEARCH FORUMS**

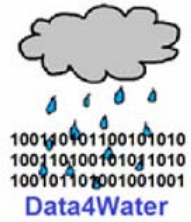
  
[Advanced search](#)

**LATEST NEWS**

Add a new topic

Fig. 6. Deliverables

- Detailed activity plan (describes the activity plans)
- Financial information (presents the budget of the project)



← → C data4water.pub.ro/course/view.php?id=12

DATA4WATER Silvia-Oana ANTON

**NAVIGATION**

- Home
- Dashboard
- Site pages
- Current course
  - Financial information**
    - Participants
    - Badges
    - General
    - Budget
- My courses

News forum

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## Budget

Budget

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**MY COURSES**

- Data4Water Project
- Work packages
- Deliverables
- Detailed activity plan
- Financial information
- Project Gantt Chart
- Milestones
- Kickoff Meeting
- Networking event
- Scientific event
- Workshop
- Summer school
- Training
- Staff exchange
- Project proposals
- Information materials
- Research results
- References to articles
- Related literature
- All courses ...

**ADMINISTRATION**

- Course administration
  - Turn editing on
  - Edit settings
  - Users
  - Filters
  - Reports
  - Grades
  - Outcomes
  - Badges
  - Backup
  - Restore
  - Import
  - Reset
  - Question bank
- Switch role to ...
- Site administration

**SEARCH FORUMS**

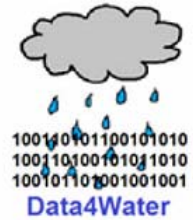
Advanced search

**LATEST NEWS**

Add a new topic ...

Fig. 7. Financial information

- Project Gantt Chart (presents the project Gantt Chart)



← → ↻ data4water.pub.ro/course/view.php?id=10

DATA4WATER Silvia-Oana ANTON

**NAVIGATION**

- Home
- Dashboard
- Site pages
- Current course
  - Project Gantt Chart**
    - Participants
    - Badges
    - General
    - Data4WaterGantt
- My courses

Forum ştiri

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## Data4WaterGantt

Data4WaterGantt

Data4WaterGantt

**MY COURSES**

- Data4Water Project
- Work packages
- Deliverables
- Detailed activity plan
- Financial information
- Project Gantt Chart
- Milestones
- Kickoff Meeting
- Networking event
- Scientific event
- Workshop
- Summer school
- Training
- Staff exchange
- Project proposals
- Information materials
- Research results
- References to articles
- Related literature
- All courses ...

**ADMINISTRATION**

- Course administration
  - Turn editing on
  - Edit settings
  - Users
  - Filters
  - Reports
  - Grades
  - Outcomes
    - Badges
  - Backup
  - Restore
  - Import
  - Reset
  - Question bank
- Switch role to ...
- Site administration

**SEARCH FORUMS**

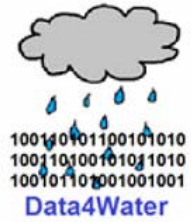
[Advanced search](#)

**LATEST NEWS**

Add a new topic...

Fig. 8. Data4WaterGantt

- Milestones (presents the milestones of the project – the most important events of the project)



DATA4WATER

NAVIGATION

- Home
- Dashboard
- Site pages
- Current course
  - Milestones**
    - Participants
    - Badges
    - General
    - Milestones
  - My courses

ADMINISTRATION

- Course administration
  - Turn editing on
  - Edit settings
  - Users
  - Filters
  - Reports
  - Grades
  - Outcomes
  - Badges
  - Backup
  - Restore
  - Import
  - Reset
  - Question bank
- Switch role to...
- Site administration

News forum

### Milestones

- Milestones

MY COURSES

- Data4Water Project
- Work packages
- Deliverables
- Detailed activity plan
- Financial information
- Project Gantt Chart
- Milestones
- Kickoff Meeting
- Networking event
- Scientific event
- Workshop
- Summer school
- Training
- Staff exchange
- Project proposals
- Information materials
- Research results
- References to articles
- Related literature
- All courses ...

SEARCH FORUMS

[Advanced search](#)

LATEST NEWS

[Add a new topic...](#)

Fig. 9. Milestones

### 3.3 Events

This section presents the events of the project:

- Kickoff Meeting (give information about the opening event of the project)

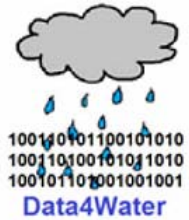
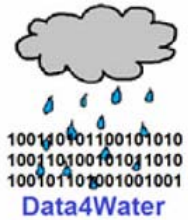


Fig. 10. Kickoff Meeting

- Networking event
- Scientific event (presents scientific events related to the project field, where the members of the project are involved)



The screenshot shows the DATA4WATER website interface. The main content area features a 'News forum' section with three news items:

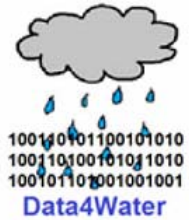
- Water Week organized by the SIWI in Stockholm**: The theme of the 2016 World Water Week in Stockholm is 'Water for Sustainable Growth'. <http://www.worldwaterweek.org/the-submission-for-seminar-abstracts-is-now-open>
- IEEE International Conference on Advanced Information Networking and Applications**: The 30<sup>th</sup> IEEE International Conference on Advanced Information Networking and Applications (AINA-2016). Le Régent Congress Centre, Crans-Montana, Switzerland, March 23-25, 2016. <http://vooyager.ce.ifi.ch/aina2016/>
- International Conference on Automation, Quality and Testing, Robotics**: The International Conference on Automation, Quality and Testing, Robotics (AQTR 216). Organized by IEEE Computer Society - Test Technology Technical Council, Technical University of Cluj Napoca, Romania, Department of Automation, IPA-S.A. - R&D Institute for Automation, May 19-21, Cluj-Napoca, Romania. <http://www.aqtr.ro/index.html>

The left sidebar contains navigation and administration menus. The right sidebar includes 'MY COURSES', 'SEARCH FORUMS', and 'LATEST NEWS' sections.

Fig. 11. Scientific event

- Workshop (presents the workshops organized in the project)





The screenshot shows a web browser window with the URL `data4water.pub.ro/course/view.php?id=16`. The page title is "DATA4WATER" and the user is logged in as "Sivia-Oana ANTON".

**NAVIGATION:**

- Home
- Dashboard
- Site pages
- Current course
  - Workshop**
    - Participants
    - Badges
    - General
    - 1st Workshop
    - 2nd Workshop
  - My courses

**ADMINISTRATION:**

- Course administration
  - Turn editing on
  - Edit settings
  - Users
  - Filters
  - Reports
  - Grades
  - Outcomes
  - Badges
  - Backup
  - Restore
  - Import
  - Reset
  - Question bank
- Switch role to...
- Site administration

**News forum:**

- 1st Workshop**  
1<sup>st</sup> workshop will take place at the University Politehnica of Bucharest, February 11-12, 2016.  
[Agenda](#)
- 2nd Workshop**  
A second workshop is planned to take place at UNESCO-IHE in Delft, The Netherlands, from 8 to 10 June, 2016.  
[Agenda](#)

**MY COURSES:**

- Data4Water Project
  - Work packages
  - Deliverables
  - Detailed activity plan
  - Financial information
  - Project Gantt Chart
  - Milestones
  - Kickoff Meeting
  - Networking event
  - Scientific event
  - Workshop
  - Summer school
  - Training
  - Staff exchange
  - Project proposals
  - Information materials
  - Research results
  - References to articles
  - Related literature
  - All courses ...

**SEARCH FORUMS:**

SEARCH FORUMS [input] Go  
Advanced search (🔍)

**LATEST NEWS:**

Add a new topic...

Fig 12. Workshop

- Summer school (presents the summer school organized by the project for the students)



The screenshot shows a web browser window with the URL `data4water.pub.ro/course/view.php?id=15`. The page title is "DATA4WATER" and the user is logged in as "Silvia-Dana ANTON".

**NAVIGATION**

- Home
- Dashboard
- Site pages
- Current course
  - Summer school
    - Participants
    - Badges
    - General
    - Summer School – CyberFlow
  - My courses

**ADMINISTRATION**

- Course administration
  - Turn editing on
  - Edit settings
  - Users
  - Filters
  - Reports
  - Grades
  - Outcomes
  - Badges
  - Backup
  - Restore
  - Import
  - Reset
  - Question bank
- Switch role to...
- Site administration

**MY COURSES**

- Data4Water Project
- Work packages
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- Information materials
- Research results
- References to articles
- Related literature
- All courses ...

**SEARCH FORUMS**

SEARCH FORUMS [input] [Go] [Advanced search]

**LATEST NEWS**

Add a new topic...

**Summer School – CyberFlow**

We will be organising the first Summer school on Intelligent Metering and Big Data in Hydroinformatics in 2016 from the 21st June to the 8th July.

This summer school is organized with the help of researchers and experts from University Politehnica of Bucharest, UNESCO-IHE Institute for Water Education, University of Iowa, and Università Degli Studi Di Milano-Bicocca.

**Description:**

CyberFlow is a three-weeks Summer school and it has the following schedule:

1. Training courses – 3 days [21th to 23th June]
2. Session to define the Summer school assignments – 1 day [24th June]
3. Problem solving sessions – 12 days [25th June to 6th July]
4. Session for presenting the final results - 2 days [7th July to 8th July]

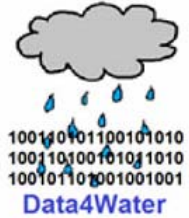
Summer School - CyberFlow

Fig. 13. Summer School

- Training
- Staff exchange

### 3.4 Scientific resources

- Project proposals
- Information materials from industry
- Research results
- References to articles (presents articles published by the team of the project in the field of the project)



The screenshot shows a web browser window with the URL `data4water.pub.no/course/view.php?id=21`. The page title is "DATA4WATER" and the user is identified as "Silvia-Oana ANTON". The main content area is titled "UPB Publications" and contains a list of references under the heading "CyberWater - water resources management".

**NAVIGATION**

- Home
- Dashboard
- Site pages
- Current course
- References to articles
  - Participants
  - Badges
  - General
  - UPB Publications
  - UNIMB Publication List
  - FOKUS Publication List
  - UNESCO-IHE Publication List
- My courses

**ADMINISTRATION**

- Course administration
  - Turn editing on
  - Edit settings
  - Users
  - Filters
  - Reports
  - Grades
  - Outcomes
  - Badges
  - Backup
  - Restore
  - Import
  - Reset
  - Question bank
- Switch role to...
- Site administration

**UPB Publications**

**CyberWater - water resources management**

- Anca Daniela Ionita, Mariana Mocanu: [Models of Organizational Change for Modernizing Pollution Warning Services](#). IAENG TRANSACTIONS ON ENGINEERING SCIENCES, Special Issue for the International Association of Engineers, World Scientific Publishing Co. Pte. Ltd, 2015, ISBN: 978-981-4667-35-7, pg 490-510.
- Negru, Catalin, Mocanu, Mariana, Chiru, Costin, Draghia, Aurelian, Drobot, Raidu, "Cost efficient cloud-based service oriented architecture for water pollution prediction," in *Intelligent Computer Communication and Processing (ICCP), 2015 IEEE International Conference on*, vol. no., pp 417-423, 3-5 Sept. 2015, doi: 10.1109/ICCP.2015.7312696
- Florin Pop, Catalin Negru, Florin Anton, Mariana Mocanu, Theodor Borangiu, Valentin Cristea, [Cloud Computing Services for Environmental Modeling](#), *3rd International IBM Cloud Academy Conference ICACON 2015*, 21-23 May, Budapest, Hungary, 2015
- Manaila, F., & Mocanu, M. (2014, September). [Heterogeneous sensor network systems](#). In *Intelligent Computer Communication and Processing (ICCP), 2014 IEEE International Conference on* (pp. 363-368). IEEE.
- Popescu, S. I., Mocanu, M., & Ionita, A. D. (2014, September). [Customisable decision support service for water management in river basins](#). In *Intelligent Computer Communication and Processing (ICCP), 2014 IEEE International Conference on* (pp. 377-382). IEEE.
- Pop, F., Ciolofan, S., Negru, C., Mocanu, M., & Cristea, V. (2014). [A Bio-Inspired Prediction Method for Water Quality in a Cyber-Infrastructure Architecture](#). 2014 Eighth International Conference on Complex, Intelligent and Software Intensive Systems, 367-372. doi:10.1109/CISIS.2014.51
- Andrei Alexandru Nicolae, Catalin Negru, Florin Pop, Mariana Mocanu, Valentin Cristea, [Hybrid Algorithm for Workflow Scheduling in Cloud-based Cyberinfrastructures](#). 2014 International Conference on Network-Based Information Systems, 10.1109/NBIS.2014.69, pp. 221 - 229, ISBN 978-1-4799-4224-4, IEEE
- Sonn Ciolofan, Mariana Mocanu, Florin Pop, Valentin Cristea, [Improving Quality of Water Related Data in a Cyberinfrastructure](#). Third International Workshop on Cyber Physical Systems, 10.13140/2.1.1380.4803, 2014
- Ionita, A. D., & Mocanu, M. (2014). [A Metamodeling Perspective on the Users of a Service-Oriented Hydrology System](#). In *Proceedings of the World Congress on Engineering* (Vol. 1).
- Anca Ionita, Mariana Mocanu: [Multiole Modelina Paradimi Applied for Accidental](#)

**MY COURSES**

- Data4Water Project
- Work packages
- Deliverables
- Detailed activity plan
- Financial information
- Project Gantt Chart
- Milestones
- Kickoff Meeting
- Networking event
- Scientific event
- Workshop
- Summer school
- Training
- Staff exchange
- Project proposals
- Information materials
- Research results
- References to articles
- Related literature
- All courses ...

**SEARCH FORUMS**

SEARCH FORUMS

Go

Advanced search

**LATEST NEWS**

Add a new topic...

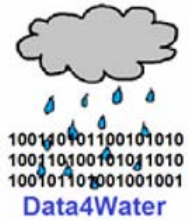
(No news has been posted yet)

**UPCOMING EVENTS**

There are no upcoming events

Fig. 14. References to articles

- Related literature (presents literature references which is in the field of the project and presents interest for the team in the development of the deliverables)



data4water.pub.ro/course/view.php?id=20

DATA4WATER Silvia-Oana ANTON

**NAVIGATION**

- Home
- Dashboard
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- Current course
  - Training materials**
    - Participants
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    - General
    - general articles
  - My courses

**ADMINISTRATION**

- Course administration
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  - Reset
  - Question bank
- Switch role to...
- Site administration

**News forum**

- Project Factsheets - Environment Digital Single Market
- paper-published
- Water and Education Workshop Final Report
- WATER
- www.ict4water
- T0B110000253301PDFE
- » Big Data Can Solve Big Problems, but Only If Computing Can Keep Up
- 2015-water-data-green-button
- conf188a175
- HYDR0-D-11-00017
- ICT for Water management roadmap 2014
- ICT for Water Management Roadmap 2015 Digital Single Market
- ICT4WaterManagementRoadmap1stJune2015
- ICT-and-Water-Projects-Lydia-Lyroudlia
- IPopescu-Publications-2015
- Teodosiu&all, 2013

**MY COURSES**

- Data4Water Project
- Work packages
- Deliverables
- Detailed activity plan
- Financial information
- Project Gantt Chart
- Milestones
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**SEARCH FORUMS**

  
Advanced search

**general articles**

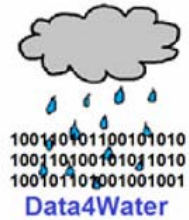
- Water Case Studies

**LATEST NEWS**

Add a new topic...

(No news has been posted yet)

Fig. 15. Related literature



#### 4. Technologies used and features of the web site

Knowledge-lake platform is built on top of an open-source content management and e-Learning platform called Moodle. It is customized to fulfil our needs, as presented throughout this document.

For installing and running, a Moodle instance one needs a web server publicly accessible and a data base to store all the relevant informations. We used as a web server an Apache2 service and for the database we used MariaDB. All these services are hosted as virtual machines running in a High Available Cluster environment. If any of the physical servers that are hosting the services have a problem, these are automatically migrated to another physical server. Thus we ensure a high available environment for the Knowledge Lake platform.

Using Moodle framework allowed us to structure the information in categories and sections, creating an access list model based on sections (we can control the access to a section on a user level). Another feature for increasing interactivity between Knowledge Lake users is the forum based discussions: there is a general “News forum” which is used for posting relevant news for the whole project and is accessible only by the leading group of the project and there is a forum created for each section where any members of that section can post and answer.

Another important feature provided by Knowledge Lake platform is the centralized view of all users of the project and all partners interested in this subject. Any news sent through the platform automatically notifies all the enrolled users.