

SUPSI

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# WASH COMPETENCE CENTRE SUPSI

2016

Annual report



WASH Competence Centre  
Campus SUPSI Trevano  
CH-6952 CANOBBIO  
Switzerland

Tel. +41 58 666 63 00  
[www.supsi.ch/go/wash](http://www.supsi.ch/go/wash)  
[wash@supsi.ch](mailto:wash@supsi.ch)

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*WASH is an acronym used in international development programs and refers to "Water, Sanitation and Hygiene". The term indicates a solution oriented set of operations designed to achieve SDG 6, "Ensure availability and sustainable management of water and sanitation for all". It is a term used in the jargon during operations in development settings rather than a pure scientific term. Access to safe water, adequate sanitation, and proper hygiene education can reduce illness and death from disease, and also impact poverty reduction and socio-economic development."*

## Objectives of the WASH Competence Centre

The WASH Competence Centre was founded at SUPSI on the 22. March 2012, in occasion of the World Water Day and integrated in the Centre for Development and Cooperation at SUPSI, [www.supsi.ch/development-cooperation](http://www.supsi.ch/development-cooperation) .

WASH is an acronym used in international development programs and refers to "Water, Sanitation and Hygiene". Access to safe water, adequate sanitation, and proper hygiene education can reduce illness and death from disease, and also impact poverty reduction and socio-economic development.

These areas are treated together as the impact of deficiencies in each area overlap strongly, and so to achieve a strong positive impact on public health, they need to be addressed together.

The WASH competence centre is a network of SUPSI staff members involved in teaching, research and services/consultancies in the field of water resources and is embedded in the Centre for Development and Cooperation at SUPSI.

Members have experience in cooperation and development projects at international level.

### **Remind:**

World Water Day is held annually on 22 March as a means of focusing attention on the importance of freshwater and advocating for the sustainable management of freshwater resources.

An international day to celebrate freshwater was recommended at the 1992 United Nations Conference on Environment and Development (UNCED). The United Nations General Assembly responded by designating 22 March 1993 as the first World Water Day. Each year, World Water Day highlights a specific aspect of freshwater. In 2017, the theme is "Wastewater."



## Staff

Staff member, Department*	Profession	Main geographic work experience
<b>Sebastian Pera</b> (Coordinator) DECD	Hydrogeologist	Argentina, Cuba, Indonesia, Chad, Pakistan
<b>Claudio Valsangiacomo</b> (Coordinator) DECD	Microbiologist	Zimbabwe, DR Congo, Pakistan, Philippines, Central Asia, Haïti, Caucasus Region, Yemen
<b>Marcus Hoffmann</b> DECD	Physicist	Azerbaijan, Caribbean, Indonesia, Slovenia
<b>Pamela Principi</b> DIT	Microbiologist	South Africa, China
<b>Enrica Massardi</b> DBEHS	Nurse	Afghanistan, Sierra Leone, India, Cambodia, Togo
<b>Paola Solcà</b> DBEHS	Sociologist Anthropologist	South Africa, Nicaragua, Bolivia, Argentina, Romania, Burkina Faso
<b>Fabio Losa</b> DBEHS	Economist	South Africa, Central African Republic, Lesotho, Sierra Leone, Senegal, Malawi, Zambia, Rwanda, Burundi, Congo DR, El Salvador
<b>Roger König</b> DIT	Environmental Biotechnologist	China, UAE, Antarctica
<b>Massimiliano Cannata</b> DECD	Environmental Engineer	Vietnam, Brazil, Sri Lanka, Romania, Caribbean, Europe, Canada
<b>Andrea Rizzoli</b> DIT	Control Engineer	Europe
<b>Francesca Cellina</b> DECD	Environmental Engineer	Europe
<b>Lorenza Rusconi-Kyburz</b> , DTL	Pedagogue	Kenya, Togo, Ecuador, Nicaragua
<b>Sara Benini</b> , DTL	Pedagogue	Europe

\*) DECD: Department for Environment Constructions and Design, DIT: Department of Innovative Technologies, DBEHS: Department of Business Economics, Health and Social Care, DTL: Department for Teaching and Learning



From left: Claudio Valsangiacomo, Sebastian Pera, Marcus Hoffmann, Pamela Principi, Enrica Massardi, Paola Solcà, Renzo Longhi (retired), other members are missing on this picture.

## Teaching and training

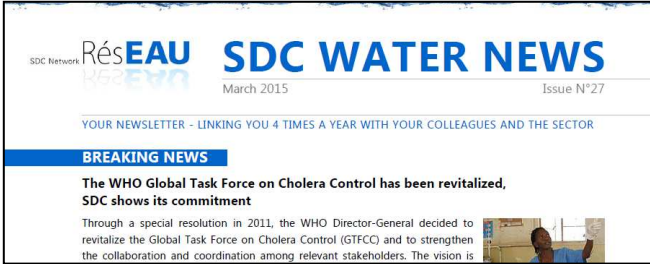
The WASH CC is involved both in graduate/postgraduate education and in lifelong learning within SUPSI and other academic institutes.

Teaching module and Staff members involved	Content	Target students
<p><b>Course “Water and sanitation engineering”</b>  <b>CHYN/CICIR and CHYN/UNHCR</b></p> <p><b>Claudio Valsangiacomo</b></p>	<p>The Centre of Hydrogeology of the University of Neuchâtel (CHYN) and the International Committee of the Red Cross (ICRC - Wathab Unit) propose the <a href="#">course on water and sanitation engineering</a> with the aim to enable participants to acquire the basic technical skills required to conduct their activities as water and sanitation engineers (Watsan). The same course has been replicated for attendants from UNHCR field officers.</p>	<p>The course is designed for engineers and scientists interested in a humanitarian engagement in the domain of water and sanitation.</p>
<p><b>CAS</b></p> <p><b>Claudio Valsangiacomo and Paola Solcà</b></p>	<p>A Certificate of advanced studies in development and cooperation has started in October 2014.</p>	<p>19 students interested in development and cooperation with a Bachelor or Master degree have followed the CAS in 2016.</p>
<p><b>Courses “Global world, local worlds: practical traineeship”, “International Cooperation” and “Internship in international school contexts”</b></p> <p><b>Paola Solcà, Enrica Massardi, Lorenza Rusconi-Kyburz and Sara Benini</b></p>	<p>Courses and practical training are offered at DBEHS and DTL for small groups of students at Bachelor and Master level. The overarching goal of the program is to prepare students to address the traineeship that will be held at projects located abroad in developing countries. Furthermore, beside the theoretical courses, a series of events are offered with the aim to interest, motivate and raise awareness on the meaning and value of international cooperation and development.</p>	<p>Health, social work and teacher college students who will experience clinical and educational practices in development and cooperation context.</p>
<p><b>Master thesis, Università di Brescia, Italy.</b></p> <p><b>Pamela Principi, Claudio Valsangiacomo</b></p>	<p>The cycle of sanitation in developing countries, analysis of technologies and case studies.</p> <p>Original title: <i>“Ciclo della “Sanitation” nei paesi in via di sviluppo, analisi di tecnologie e casi studio”</i>. Spervised by Sabrina Sorlini, Marta Domini, UNI Brescia.</p>	<p>Mario Pistocchini: Master student from Brescia University, CetAMb-LAB.</p>
<p><b>Monitoring, evaluation, and learning for WASH</b></p> <p><b>Claudio Valsangiacomo</b></p>	<p>Distance learning modules on “Water quality”, “Water testing” and “Water in emergency” at the Water Institute, University of North Carolina (and UNC colleagues Water Institute (James Bartram, Pete Kolsky, Shannan George). Didactic materials, thinking exercises, tests.</p>	<p>International professionals active in developing countries.</p>

## Applied research

Project, main authors, country	Description	Partners
<b>4ONSE: analysis of Four times Open Non-conventional system for Sensing the Environment</b>  <b>Massimiliano Cannata</b>  <b>Sri Lanka, Indonesia and Pakistan</b>	<p>Shorter reaction time to prepare adequate measures in case of meteorological hazards depends on complete meteorological data. The project empowers developing countries to set up and maintain a climate monitoring network proposing a fully open solution.</p> <p>For further information: <a href="http://www.4onse.ch">www.4onse.ch</a> &amp; <a href="http://www.r4d.ch/modules/thematically-open-research/climate-monitoring-system">http://www.r4d.ch/modules/thematically-open-research/climate-monitoring-system</a></p> <p>This project is jointly funded by SNSF and SDC within the R4D (<a href="http://www.r4d.ch">www.r4d.ch</a>) programme.</p>	<p>P. K. Seneviratne Mahanama, University of Moratuwa, Sri Lanka</p> <p>Oka Karyanto, Universitas Gadjah Mada, Indonesia</p> <p>Imran Shahid, Institute of Space Technology, Pakistan</p>

## Consulting activities

Consultancy and main authors	Description	Partners
<b>The WHO Global Task Force on Cholera Control</b> <b>Claudio Valsangiacomo</b>	<p>The Global Task Force for Cholera Control (<a href="#">GTFCC</a>) was revitalized by WHO. The revitalization process was initiated in 2012 and completed in early 2014. First meeting of the revitalized GTFCC has taken place in June 2014 to finalize membership and priorities.</p> <p>The WASH CC @SUPSI is represented in the Working Group WASH</p> <p>For further information: <a href="http://www.who.int/cholera">www.who.int/cholera</a></p>	<p>SDC, humanitarian aid (Swiss Corps), co-representation within WG WASH.</p> <ul style="list-style-type: none"> <li>• May 2015: 1<sup>st</sup> meeting of the WASH Working Group of the GTFCC in New York</li> <li>• June 2015: 2<sup>nd</sup> meeting of the GTFCC in Geneva</li> <li>• June 2016: 3<sup>rd</sup> meeting of the GTFCC in Amman, Jordan</li> </ul> 
<b>SDC's Water and Sanitation Programme in the Great Lakes Region (WATSAN) Final programme evaluation</b>  <b>Fabio Losa, Anja Gafner, Maurizio Bigotta and Claudio Valsangiacomo</b>	<p>The WASH CC team was hired by SDC to conduct an ex post independent evaluation of the WATSAN Programme in the Great Lakes region. The programme provided access to water and sanitation facilities and hygiene education in health centres in a number of districts in Rwanda, Burundi and Congo DR (South Kivu). The team was on a field mission from the end of January to the end of February.</p>	<p>The team had meetings with staff and representatives of SDC's regional office and country offices, and with Ministries, local authorities, international organizations and NGOs (UNICEF, UNFPA, JICA, etc.).</p>

## Memberships

Membership	Description	WASH staff members
<b>AGUASAN</b>	Swiss Community of practice on WASH issues  <a href="http://www.aquasan.ch">www.aquasan.ch</a>	Claudio Valsangiacomo, Sebastian Pera, Pamela Principi and Fabio Losa.
<b>Swiss humanitarian aid unit</b>	Membership in specialized groups WES (Water and Environmental Sanitation) and Med (Medicine)  <a href="http://www.skh.ch">www.skh.ch</a>	Claudio Valsangiacomo
<b>Solidarit'eau suisse</b>	solidarit'eau suisse is an initiative of SDC, the Aguasan Group and Swiss aid organizations enabling local authorities to support a drinking water project in a developing country in an efficient and transparent manner.  <a href="http://www.solidariteausuisse.ch">www.solidariteausuisse.ch</a>	Claudio Valsangiacomo (Member of the steering Board)
<b>HydroDWG</b>	Hydrology Domain Working Group of the OGC  <a href="http://www.opengeospatial.org">www.opengeospatial.org</a>	Andrea Rizzoli (observer)
<b>iEMSS</b>	International Environmental Modeling & Software Society  <a href="http://www.iemss.org">www.iemss.org</a>	Andrea Rizzoli
<b>Swiss Municipalities</b>	Local energy planning processes for Municipalities. In energy planning processes at the local level, identification of the opportunities for electricity production and thermal energy recovery in waterworks systems and sewage water networks. (FC)	Francesca Cellina
<b>Federazione delle ONG della Svizzera italiana, FOSIT</b>	Member of the steering committee since April 2013, <a href="http://www.fosit.ch">www.fosit.ch</a>	Paola Solcà

### Solidarit'eau suisse in the Canton of Ticino.

Thanks to our presence in the Steering Committee of solidarit'eau Suisse, the Canton of Ticino has the highest score of municipalities promoting water projects in developing countries (45 Swiss Italian municipalities out of 172).

See [www.solidariteausuisse.ch](http://www.solidariteausuisse.ch)



## Institutional partnerships

Institution, WASH member involved	Type of partnership	Internet web-page
<b>FOSIT, Federazione delle ONG della Svizzera italiana</b>  <b>Paola Solcà</b>	Memorandum of understanding for joint projects in development and cooperation SUPSI-FOSIT	<a href="http://www.fosit.ch">www.fosit.ch</a>
<b>swissuniversities Development and Cooperation Office</b>  <b>Claudio Valsangiacomo</b>	Focal point for development and cooperation within Swiss Universities.	<a href="http://www.swissuniversities.ch">www.swissuniversities.ch</a>
<b>Foundation for Education and Development (since January 2013 Education 21)</b>  <b>Paola Solcà, Lorenza Rusconi-Kyburz and Sara Benini</b>	The Foundation has supported financially and practically the project “practical internship in the developing countries” at DBSS since 2002. In 2012 the Department of Teaching and Learning has joined the 3rd phase of the SDC program “partnership Nord-South” (2012-2015). In 2016 the 4rd phase has started (2016-2018). In this period the focus is “education on sustainable development” according the Agenda 2030.	<a href="http://www.education21.ch">www.education21.ch</a>
<b>International Cooperative Programme on Assessment and Monitoring of the Effects of Air Pollution on Rivers and Lakes, ICP Waters</b>  <b>Luca Colombo</b>	ICP Waters is a programme for monitoring of the effects of acid rain and air pollution on water and water courses. Twenty countries (18 European countries, USA and Canada) participate and supply monitoring data to the programme's central database at NIVA. The monitoring data provide a basis for documenting effects of long-range transboundary air pollutants.	<a href="http://www.icp-waters.no">www.icp-waters.no</a>
<b>Associazione svizzera dei professionisti della protezione delle acque, VSA</b>  <b>Pamela Principi, Sebastian Pera</b>	The Swiss Water Association is the professional society for water in Switzerland lobbies for clean and vital bodies of water is generalist for all questions concerning water is specialist for sanitation and bodies of water. The association represents the aggregation of the Swiss professionals for water protection. VSA offers professional training programs, defines the standards for security and quality and informs about water pollution control.	<a href="http://www.vsa.ch">www.vsa.ch</a>
<b>BioSweet SCCER</b>  <b>Pamela Principi</b>	SCCER BIOSWEET focuses on the biochemical and thermochemical conversion of wood, biowaste/manure and algae to gaseous and liquid biofuels with the vision to contribute additional 100 PJ towards fulfilment of the Swiss Energy Transition by 2050. Research will be directed towards small and medium-size installations in order to meet the needs of the Swiss market and to exploit the high innovation potential in both fields together with Swiss industry.	<a href="http://www.sccer-biosweet.ch">www.sccer-biosweet.ch</a>
<b>Open Source Geospatial Foundation OSGeo</b>  <b>Massimiliano Cannata</b>	OSGeo, support the collaborative developments open source geospatial software, and promotes its widespread use. The foundation's projects are all freely available and useable under an OSI-certified open source license.	<a href="http://www.osgeo.org">www.osgeo.org</a>



## Media, communication and events

Subject and staff members involved	Type of media, communication, event	Contents
<p><b>Cholera epidemic in Yemen</b></p> <p><b>Claudio Valsangiacomo</b></p>	<p>SRF 4 News Aktuell</p>	<p>A consultancy for the prevention of the creeping cholera epidemic in the fall 2016 was performed on behalf of SDC, Swiss humanitarian aid unit. The consultancy was offered to the local WASH cluster, led by UNICEF.</p> <p><b>«Die Wasserversorgung funktioniert nur noch mit Lastwagen»</b></p> <p>Montag, 28. November 2016, 19:27 Uhr <span style="float: right;">f 1 4 3 Kommentare</span></p> <p>Im Bürgerkriegsland Jemen ist das Problem mit dreckigem Trinkwasser riesig. Ein Schweizer Biologe versucht zu helfen.</p>  <p>4:54 min, aus SRF 4 News aktuell vom 28.11.2016</p>
<p><b>SUPSI, November 22, 2016</b></p> <p><b>Fabio Losa, Anja Gafner, Maurizio Bigotta and Claudio Valsangiacomo</b></p>	<p>Seminar</p>	<p>“Evaluation externe du Programme DDC - WATSAN dans la région des Grands Lacs africains. L’expérience, les défis et les leçons apprises.”</p>
<p><b>Fabio Losa</b></p>	<p>Articles</p>	<p>“Small data” obstacle pour le développement des pays du sud. Expérience d’une évaluation de programme en Afrique. Extra dati, A. XVII, n. 01, gennaio 2017.</p> <p>“Small Data” ostacolo per lo sviluppo del sud del mondo. Esperienze da una valutazione di programma in Africa. Dati, statistiche e società, XVI (2), 102-109.</p>

## Abbreviations

COHEP	Swiss Conference of Rectors of Universities of Teacher Education
CRUS	Rectors' Conference of the Swiss Universities
EU	European Union
FOSIT	Federazione delle ONG della Svizzera italiana
KFH	Rectors' Conference of the Swiss Universities of Applied Sciences
KFPE	Commission for Research Partnerships with Developing Countries
SDC	Swiss Agency for Development and Cooperation
SDG	Sustainable development goal
SNSF	Swiss National Science Foundation
SNIS	Swiss Network for International Studies
SUPSI	Scuola universitaria professionale della Svizzera italiana (University of Applied Sciences and Arts of Southern Switzerland).
UN	United Nations
UAS	Universities of Applied Sciences and Arts
UNOSAT	UNITAR's Operational Satellite Applications Programme
UNITAR	United Nations Institute for Training and Research
UTE	Universities of Teachers Education
USI	Università della Svizzera italiana
WHO	World Health Organization