Name Raquel dos Santos de Quaij

Year of birth 1973

Nationality Brazilian/Dutch

Gender Female Civil status Married

Job position at IHE Researcher/Lecturer in Water Management

Years with firm June 2008 - present

#### ACADEMIC EDUCATION

2013 - in progress - **PhD Research:** Pro-poor Water and Sanitation Services in Urban Areas:

a Multi-level Analysis of São Paulo city, Brazil

UvA - University of Amsterdam, Amsterdam, The Netherlands UNESCO-IHE Institute for Water Education, Delft, The Netherlands (currently, I am carrying out this research on my own time - no IHE funds)

2006 - 2008 - Master of Science in Environmental Sciences - 2nd

UNESCO-IHE Institute for Water Education, Delft, The Netherlands

Specialization: Environmental Planning & Management
Thesis: Performance of River Basin Organizations in Brazil:
a case study of the Piracicaba-Capivari-Jundiaí Committee

2004 - 2006 - Master in Collective Health - 1st

Medical Sciences College of the Santa Casa Hospital, São Paulo, Brazil

**Specialization:** Collective Health & Social Medicine

**Thesis:** Accidents with Dangerous Goods on Road Transport:

a guideline for the Health Surveillance actions in São Paulo State

2003 - Specialization in Environmental Health Surveillance

UFRJ Rio de Janeiro Federal University, Rio de Janeiro, Brazil

2002 - Specialization in Environmental Pollution Control Engineering

USP University of São Paulo, São Paulo, Brazil

2000 - 2001 - Specialization in Sanitary Surveillance

UNITAU University of Taubaté, São Paulo, Brazil

1996 - 1999 - Bachelor: Technology of Civil Construction (Hydraulic Projects) - 2nd

UNESP São Paulo State University, São Paulo, Brazil

1993 - 1995 - Bachelor: Technology on Basic Sanitation (Water & Sewerage) - 1st

UNICAMP State University of Campinas, Limeira, Brazil

#### EMPLOYMENT RECORD

2010 - present - UNESCO-IHE Institute for Water Education, Delft, The Netherlands

**Department:** Integrated Water Systems & Governance **Job position:** Researcher/Lecturer in Water Management (0.4fte IWSG and 0.2fte Education Bureau)

2008 – 2010 - UNESCO-IHE Institute for Water Education, Delft, The Netherlands

**Department:** Management and Institutions **Job position:** Education Coordinator (0.6fte)

1998 – 2008 - Research Institutes Administration of the São Paulo State Health Secretariat, Brazil

**Department:** Environmental Actions (CVS)

Job position: Technical Director of the Environmental Health Group

**Additional role:** 1st Deputy to the Director from 2001 to 2006 including supervision over about 20 staff members involved in applied research and capacity building programmes. **Sabbatical leave:** during MSc period in the Netherlands - Oct/2006 to May/2008

1996 – 1998

- Sanitary Surveillance Central Office of the São Paulo State Health Secretariat, Brazil

**Department:** Environmental Actions (CVS)

Job position: Sanitary Inspector of the Basic Sanitation Technical Group

**Additional role:** 1st Deputy to the Director in 1997 and 1998

1994 – 1996

- Limeira Health Regional Office, São Paulo State Health Secretariat, Limeira, Brazil

**Department:** Technical Sanitary Surveillance

**Job position:** Sanitary Inspector (Water Supply & Sanitation Services)

### MAIN DISCIPLINES

<u>Primary:</u> (Pro-poor) Performance/Benchmarking of WatSan Services & River Basin Organizations <u>Secondary:</u> Water Governance - focus on (Pro-poor) Urban & Multi-level Dimensions; Environmental Health

Research Line: Institutional Dimensions of Water Systems

PROFE	SSIONAL EXPERIENCE			
2010				
2010 –	As a junior Researcher/Lecturer in Water Management of the IWSG Department, I am:			
present	• Participating as Assistant Project Leader in the <i>capacity building</i> project NICHE/MOZ/149			
	Mozambique 2012-2016 (Set-up of the FIPAG academy for professional development in			
	water and sanitation) with partners from the Netherlands, Mozambique, South Africa, Brazil & Uganda;			
	<ul> <li>Participating in the <i>research</i> project PROBE II (Benchmarking pro-poor water services</li> </ul>			
	provision) with partners from the Netherlands, Brazil, India, Iran, Ghana, Uganda and			
	Zambia (between 2009 and 2012 I also participated in the PROBE I - Brazil);			
	<ul> <li>Carrying out <i>research</i> activities related to the Improvement of Water and Sanitation Pro-Poor</li> </ul>			
	focusing on the Brazilian situation, including institution analysis and end-user participation;			
	<ul> <li>Participating in the follow-up meetings of the Brazilian-Dutch Dialogue on Water</li> </ul>			
	Management (phase 3) for acquisition of new <i>projects</i> and partnerships in Brazil;			
	<ul> <li>Collaborating in the UPaRF research project on "Water Resources Management Instruments</li> </ul>			
	Implementation in River Basin Committees: an assessment and capacity building" with			
	partners from Brazil, Colombia and Ecuador;			
	<ul> <li>Working on the completion of the University Teaching Qualification (UTQ portfolio) in 2014;</li> </ul>			
	<ul> <li>Mentoring MSc students and teaching in the Water Management MSc Programme (Urban</li> </ul>			
	Water Governance Module & MScs on Benchmarking Pro-poor WatSan Services Provision);			
	<ul> <li>Developing and teaching the topic "WSS pro-poor in urban areas -" in the "Policy &amp;</li> </ul>			
	Management in Developing Countries" online course;			
	<ul> <li>Coordinating and teaching three online courses: "Water &amp; Environmental Law and Policy",</li> </ul>			
	"Integrated River Basin Management (Planning for Sustainable River Basin Development)"			
	and "Governance of Decentralized Sanitation (Poverty & Pro-poor Sanitation in Urban Area";			
	Coordinating the "Public Private Partnerships in the Water Sector" online course;			
	<ul> <li>Organizing and coordinating the "Water and Environmental Law and Policy" teaching</li> </ul>			
	activities for the WaterNet project with partners from <i>Tanzania and Zimbabwe</i> ;			
	<ul> <li>Contributing to improve, update and deliver new and existing online courses to the Integrated</li> </ul>			
	Water System & Governance and, other UNESCO-IHE Departments;			
	Assisting in the implementation of the UNESCO-IHE Virtual Learning Environment for all			
	IHE Departments (Lecturer Curriculum Development and Moodle eCampus Trainer);			
	<ul> <li>Motivating the adoption of innovative teaching methods based on life-long learning and on</li> </ul>			
	the use of virtual learning environments to enhance education and project management.			
	the use of virtual learning environments to enhance education and project management.			

2008 – 2010	<ul> <li>As Education Coordinator in the Management &amp; Institutions Department (MaI) in the Netherlands, I:</li> <li>Coordinated the Online Modules on "Water Environmental Law and Policy" and "Public-Private Partnership in the Water Sector";</li> <li>Developed activities of "Curriculum Design Support" for the MaI Department online modules and UNESCO-IHE MSc and online modules (the latter between June 2009 and July 2010);</li> <li>Developed activities of "Curriculum Development Support" for the MaI Department online modules, assisting in the updating of brochures and lecturing materials;</li> <li>Provided technical support to participants from many different countries in online modules;</li> <li>Organized and co-coordinated the Water Management International Fieldtrip;</li> <li>Organizated/guided MSc fieldtrips/videoconferences- WServices Management Specialization;</li> <li>Lectured (and supported lecturers) on the use of virtual learning environment systems for MSc and online education in the Water Services Management Specialization;</li> <li>Contributed to acquisition of students (WELP/PPP OLCs) and research partners (USP/Brazil);</li> <li>Contributed to the development of research proposals and to carry out research projects. Example: UPaRF project on river basin organizations;</li> <li>Co-supervised MSc students in the development of MSc proposals on River Basin Organizations and, Water &amp; Sanitation Incentives Pro-poor.</li> </ul>
1998 – 2006	As Technical Manager in the Environmental Health Group in Brazil, I:
	<ul> <li>Collaborated in building capacity of personnel at the municipal, state and national level. Examples: technical capacity building related to the Improvement of Basic Sanitation for Prevention and Control of Vector &amp; Water Borne Diseases and, the participation of the Health Sector in the River Basin Committees;</li> <li>Participated on boards related to Water Governance with vote rights. Examples: Management Council of the Tietê Riverbanks Environmental Protection Area; State Council of Water Resources as supplant; State Commission for Prevention of Accidents with Hazardous Goods;</li> <li>Coordinated multidisciplinary working groups. Examples: Basic Sanitation in the Control of Dengue Fever; Irregular Transport of Hazardous Goods together with Foodstuffs; Environmental Emergencies Affecting Health;</li> <li>Formulated, implemented and evaluated: research projects, plans and programmes, training materials and reports in interdisciplinary teams. Examples: Development of Guidelines for the Participation of the Health Sector in the River Basin Committees; Technical Capacity Building (Basic Courses in Environmental Health and Sanitary Surveillance); Integrated Environmental Surveillance for the Control of Dengue Fever; Environmental Health Surveillance in Hazardous Goods Accidents;</li> <li>Contributed to formulating laws and regulations in the water sector. Example: Brazilian policy defining the drinking water supply standards.</li> </ul>
1996 – 1998	As Sanitation Inspector in the Basic Sanitation Technical Group in Brazil, I:
	<ul> <li>Coordinated about 150 municipalities in the São Paulo State Surveillance Program on Water Quality for Human Consumption (PROAGUA), building capacity of staff members from 24 regional offices in charge of carrying out field studies and supervision;</li> <li>Provided technical and advisory assistance to the Director. Examples: co-development of the PROAGUA training materials and fieldwork/supervision guidelines; development of guidelines on water and sanitation issues under responsibility of the Sanitary Surveillance;</li> <li>Collaborated to build multidisciplinary partnership networks in projects and programmes, linking the technical staff members from the central and regional offices to public and private stakeholders.</li> </ul>
1994 – 1996	As Sanitation Inspector in the Technical Sanitary Surveillance Group in Brazil, I:
	<ul> <li>Carried out basic sanitation supervision and field activities related to solid waste, urban drainage, water supply and wastewater treatment plants;</li> <li>Collected water samples and carried out field <i>research</i> for the PROAGUA, linking water and sanitation services provision with environment &amp; health protection.</li> </ul>

LANGUAGE PROFICIENCY					
Language	Reading	Speaking	Writing		
Portuguese	Mother tongue	Mother tongue	Mother tongue		
English	Very Good	Very Good	Very Good		
Spanish	Very Good	Very Good	Good		
Dutch	Good	Good	Slight		
French	Moderate	Slight	None		

## **EXPERIENCE (ABROAD & PARTNERSHIPS)**

- 2014 Brazil. Short mission in partnership with HidroEx: NICHE/MOZ/149 Capacity Building Project Exploratory visit in 3 Water and Sanitation Companies Training Academies (São Paulo, Minas Gerais and Brasília) Feb
- 2012/2013 Mozambique. Short mission for starting of NICHE/MOZ/149 Capacity Building Project Dec/Jan
- 2010/2012 Brazil. Internship at USP University of São Paulo (Engineering School of São Carlos), São Paulo, Brazil in the framework of the UNESCO-IHE Project on Benchmarking for Pro-poor Water Service Provision
- 2011 Kenya. Short mission for strengthening the partnership in Joint MScs Programmes between the UNESCO-IHE ES/LWE Specialization and Egerton University January
- 2011 Brazil. Short mission for participation in pro-poor water and sanitation fieldwork *research* in slums areas of São Paulo city (Tietê river basin), and; in low income areas of Campinas and Limeira cities (PCJ river basin) with partners from the Netherlands, Brazil, Iran, Ghana, Uganda and Zambia November/December
- 2011 Brazil. Short mission representing UNESCO-IHE in the II Brazilian-Dutch Dialogue on Water Management (fieldwork in low income areas) with about 14 other Dutch institutions August/September
- 2011 Brazil. Short mission representing the Management & Institutions Department in the IV FIP International and National Experiences in Water and Sanitation, Ceará State June
- 2010 Brazil. Short mission for carrying out exploratory *research* in some slum areas of the São Paulo state, with Dutch and Brazilian partners and students in the framework of the PROBE research project May
- 2009/2010/2011 Spain and Portugal. Short mission for co-coordination of the Water Management International Fieldtrip for UNESCO-IHE MSc participants May/June
- 2009 Portugal. Short mission for partnerships & students acquisition and for improvement of the Water Management Programme. UNESCO-IHP/ HELP International Stakeholder Seminar on Strengthening Water Governance for Sustainability (Guadiana) June
- 2009 Brazil. Short mission for signing partnership agreement with University of São Paulo (USP) and São Paulo State Water and Sanitation Company (SABESP) together with prof. Richard Meganck February
- 2008 The Netherlands. Lecturing to the HidroEx Brazilian Delegation in a short course and participating in the exploratory phase of this Category II UNESCO Institute
- 2005 The Netherlands. Short mission to carry out fieldwork research at the RIVM/Utrecht on the development of guidelines for accidents with dangerous goods August

#### **Conducted Short Courses, Conferences and Workshops**

2013	Special Session: Earth System Governance-Navigating Water in the Anthropocene - <i>Pro-poor Policies and Urban Water Governance Issues</i> . GWSP Conference. Bonn, Germany.
2011	Organization and conduction of workshop for the Egerton University Partners on the use of <i>Virtual Learning Environments for Joint Education and Projects</i> . Naro Moru, Kenya.
2010	Co-organization and stakeholder engagement for the PROBE field visits in <i>low income areas</i> of four municipalities in São Paulo state with focus on water and sanitation issues. Brazil.
2010	Co-organization of the PROBE project workshop session on <i>WSS pro-poor benchmarking</i> at the IWA World Congress 2010. Canadá.
2010	Organization and conduction of training for UNESCO-IHE lecturers on the use of <i>Virtual Learning Environments for Education &amp; Capacity Building</i> . The Netherlands.
2009	Coordination of the Inception Workshop on the UPaRF project <i>Water Resources Management Instruments Implementation in Water Basin Committees: an assessment and capacity building (WARMI).</i> Delft, the Netherlands.
2009	Organization and conduction of the Short Course on <i>Prevention, Preparation and Response to Accidents with Dangerous Goods: approaching risk and health effects.</i> São Paulo, Brazil.
2006	Organization and conduction of the Seminar on Sanitary Surveillance in the Control of Aedes aegypti (dengue fever): integrated actions - focus on Basic Sanitation. São Paulo, Brazil.
2003	Coordination of working group in the Technical Meeting on Water Supply for Human Consumption in the Metropolitan Region of São Paulo. São Paulo, Brazil.
2003	Organization and conduction of the Seminar on Environmental Health Surveillance of Accidents with Dangerous Goods. São Paulo, Brazil.
2002	Facilitation of the Technical Meeting of the <i>Monitoring Program of Water for Human Consumption in the State of São Paulo</i> . Sao Paulo, Brazil.
2000	Facilitation of the 4th General Meeting of the <i>Porto Primavera Project - Health and Environmental Diagnostic of the Paulistas Municipalities belonging to the catchment area of UHE Porto Primavera - focus on basic sanitation issues</i> . Region of Porto Primavera, Brazil.

# **PUBLICATIONS**

# **Papers**

Padilla J.H.R., Rincón M.A.P., Malheiros T.F., Parra C.A.M., Prota M.G., dos Santos R., 2013. Análisis comparativo de modelos e instrumentos de gestión integrada del recurso hídrico en Suramérica: los casos de Brasil y Colombia (Comparative analysis of integrated water resources management models and instruments in South America: case studies in Brazil and Colombia). Rev. *Ambient. Água - An Interdisciplinary Journal of Applied Science*, 8(1):73-97. http://dx.doi.org/10.4136/ambi-agua.971 (in Spanish) - peer reviewed open access journal.

dos Santos R., Barbosa C., Malheiros T.F., 2011. Benchmarking serviços urbanos de água e esgoto: na busca de boas práticas pro-poor e progresso frente às metas do milênio (*Benchmarking urban water and sanitation services: searching for good practices pro-poor and progress toward the MDGs*). In: Experiências Internacionais e Nacionais de Abastecimento de Água e Esgotamento Sanitário (Water Supply and Sanitation National and International Experiences). Cadernos Inesp Ano I- INESP Series on Public Policies 4: 61-81. Ceará Government (in Portuguese).

Schneider D.D., dos Santos R., Martinez R.C., Coutinho S.M.V., Malheiros T.F., Temoteo T.G., 2010. Indicadores para serviços de abastecimento de água e esgotamento sanitário voltados às populações vulneráveis (*Water & sanitation services indicators for vulnerable populations*). Rev. Brasileira de Ciências Ambientais (Brazil Sc Journ of Environmental Sciences) 17: 65-76 (in Portuguese) - *peer reviewed open access journal*.

# Conference papers

dos Santos R., Invited Speaker in the Special Session: Earth System Governance-Navigating Water in the Anthropocene: *Pro-poor Policies and Urban Water Governance Issues*. Authors: dos Santos R., Gupta J., Schwartz K., Pouw N., GWSP Conference. Bonn, 23 May 2013 (in English).

Basílio Sobrinho G., dos Santos R., Galvão Jr A.C., dos Santos A.B., Malheiros T.F., 2012. Full-paper: *Water Supply and Sanitation Performance Improvement in Brazil: benefiting the poor?* Proceedings of the IWA World Water Congress & Exhibition 16-21 September in Busan, Korea (in English).

dos Santos R., Barbosa C., Malheiros T.F., 2010. *Pro-poor incentives for water and sanitation services provision in São Paulo state*, Brazil. Oral presentation in the IWA World Water Congress & Exhibition 2010. Special Session: Sustainable Water Services for the Urban Poor: Indicators and Benchmarking for Improved Utility Performance, 23 September in Montreal, Canada. (in English).

dos Santos R., Temoteo T.G., Malheiros T.F., Criollo R., Delello D., Blokland M., Basílio Sobrinho G., van Dijk M.P., dos Santos A.B., 2010. O uso de indicadores de serviços de saneamento básico para a tomada de decisão na gestão pública (*The use of water and sanitation services indicators for decision-making in public management*). Oral presentation in Portuguese in the XXXII Congreso Interamericano de Ingenieria Sanitaria y Ambiental AIDIS 2010. 7-11 November in Punta Cana, Dominican Republic. (in English).

Nashipili N.J., dos Santos R., Noor Z.Y., Schwartz K., Douven W., Jaspers F., 2008. *The Performance of River Basin Organizations – A Comparative Study of River Basin Organizations in Namibia, Indonesia and Brazil*. Geophysical Research Abstracts, Vol. 10, EGU2008-A-07574 (in English).

# Conference posters/panels (in Portuguese)

dos Santos R., Gupta J., Schwartz K., Pouw N., 2013. Why Pro-poor Policy Definition matters to Water Management Response: water supply & sanitation demands in urban poor pockets. Poster presented in the GWSP Conference: water in the anthropocene - challenges for science and governance. 21-24 May, Bonn, Germany (in English).

Santos, R., Maglioca, E (2004)

Basic Sanitation + Action in the Urbanization = Dengue Control. Panel and poster in: First Congress of American Environmental Health. Porto Alegre, Brazil (in Portuguese).

Quitério, LAD, Santos, R., Valentim, LSO (2003)

Environmental Health Surveillance related to the Sanitary Surveillance Environmental Actions: the experience of the São Paulo's Sanitary Surveillance Center. In: VIII Sao Paulo State Congress of Public Health. Ribeirão Preto, Brazil (in Portuguese).

Santos, R., Maglioca, E (2002)

Integrated Actions in the Dengue Control: the Role of the Sanitary Surveillance Center of the São Paulo State - focus on basic sanitation in urban areas. In: I Brazilian Symposium on Sanitary Surveillance (SIMBRAVISA). São Paulo, Brazil (in Portuguese).

Dengue x Ecopontos: integrated actions to promote health - basic sanitation with focus on solid waste control. Poster in: 11th World Congress of Public Health and 8th Brazilian Congress on Collective Health. Rio de Janeiro, Brazil (in Portuguese).

The São Paulo State Sanitary Surveillance Center: contributing to the formation of conscience in health and environment. Poster in: I Pan American Symposium on Sanitary Surveillance and II Brazilian Symposium on Sanitary Surveillance. Caldas Novas, Brazil, 2004 (in Portuguese).

Surveillance of Accidents with Dangerous Goods: the São Paulo State Sanitary Surveillance Center in the logic of prevention. Poster in: I Pan American Symposium on Sanitary Surveillance and II Brazilian Symposium on Sanitary Surveillance. Caldas Novas, Brazil, 2004 (in Portuguese).

	Environmental Health Surveillance related to Actions of Environmental Sanitary Surveillance: the experience of the São Paulo State Sanitary Surveillance Center. Poster in: VIII Congress of Public Health. Santos, Brazil, 2003 (in Portuguese).  Integrated Actions in the Control of Dengue: the participation of the Sao Paulo State Sanitary Surveillances - focus on basic sanitation. Poster in: I Brazilian Symposium on Sanitary Surveillance. São Paulo, Brazil, 2002 (in Portuguese).
Chapters in books (in Portuguese)	Marques MC, Diniz E, Carvalho ML, Pereira SD Eds. Santos R (co-author) (2002) Sanitary Surveillance Case Studies and Facts Regarding Health in Society (pages 125-148/chapter), Sobravime, Sanitary Surveillance Central Office – CVS, São Paulo.  Santos R (co-author) together with the CVS technical personnel (2001) Sanitary Surveillance: Its Trajectory in the State of São Paulo (pages 55-63/chapter), Governor Geraldo Alckmin, Sao Paulo State Government, São Paulo.
Capacity building teaching materials (in Portuguese)	Garcia R, Perrone MA, Santos R (collaboration) (1997)  1-The Water Supply Systems, PROAGUA Educational Booklets Series, Governor Mário Covas, Sao Paulo.  Garcia R, Perrone MA, Quitério LAD, Santos R (collaboration) (1997)  2-Potability Standards – Prevention and Control of Vector & Water Born Diseases.  PROAGUA Educational Booklets Series, Governor Mário Covas, São Paulo.  Perrone MA, Santos R (revision) (1997)  3-Collection and Handling of Water Samples to Protect Public Health, PROAGUA Educational Booklets Series, Governor Mário Covas, São Paulo.
Others	Advisory Editorial Board of the Book Gestão do Saneamento Básico: abastecimento de água e esgotamento sanitário (Basic Sanitation Management: water supply and sanitation). Eds: Arlindo Philippi Jr & Alceu de Castro Galvão Jr. Barueri, SP: Publisher Manole, 2012. Coleção Ambiental. USP/FSP - vários autores. ISBN 978-85-204-2975-4