

Curriculum Vitae

1. **Family name:** Beck
2. **First name:** Lucas
3. **Date of birth:** 26 February 1974
4. **Nationality:** Swiss
5. **Civil status:** Single

6. Education

Institution [Date from - Date to]	Degree(s) or Diploma(s) obtained
CIS – ETH Zurich 2006-2010	Ph.D. (international relations) Title: “Transboundary Water Allocation in the Zambezi River Basin”
ETH Zurich 1997-2002	Dipl. Kult-Ing. ETH (M.Sc rural engineering ETH Zurich, with emphasis on hydrology and hydraulic engineering)

7. Language skills

Language competence on a scale of 1 to 5 (1 - excellent; 5 - basic), add or delete lines if necessary.

Language	Reading	Speaking	Writing
German	1	1	1
English	1	1	1
French	2	2	2
Spanish	3	4	4

8. Membership of professional bodies:

- Advisory Board Member of hydrosolutions ltd. www.hydrosolutions.ch (since 2015)
- AmericanGeophysical Union www.agu.org (since 2009)
- Board member of Médecins sans Frontières (Swiss section), Geneva; www.msf.ch (2007 – 2008)
- Member of the Swiss Humanitarian Aid Unit – SHA; www.skh.ch (since 2005)
- Board member of the Lucerne Initiative for Peace and Security – LIPS www.lips-org.ch (since 2005)
- Member of Médecins sans Frontières – www.msf.ch (since 2004)

9. Other skills/memberships/awards:

- Recipient of the 2012 Hans Erni Foundation Award, nominated by Jakob Kellenberger, President of the ICRC
- Advisory Board Member of Project – Air; www.project-air.org (since 2009)
- Advisor to the Mayor of the City of Lucerne (Urs W. Studer) (2003 - 2012)

10. Present positions:

- Self employed at Lucas Beck ltd. since Nov 2014
- Affiliate, Center for Comparative and International Studies, Swiss Federal Institute of Technology, Zurich.

11. Years of experience: 14

12. Key qualifications:

- Management of projects and programmes and framework contracts
- Country strategies, sectoral, thematic and project evaluation
- Conceptual support to strategy and policy development
- Development of guidelines and tools
- Water use strategies development
- Conflict analysis and conflict resolution concepts
- Natural resources management, allocation policy development

13. Specific country experience

Country	Date from - Date to
South Sudan	April/May 2015
China	April 2014 – August 2014
Morocco	March 2013
India (Andaman Islands)	August 2012
Tanzania	October 2011
Somalia (Somaliland)	September/October 2011
Rwanda, DRC (Sud Kivu), Burundi	October 2010 – ongoing
Haiti	December 2010 – December 2011
USA (New York)	March 2009 – December 2009 (and September 2007 – March 2008)
Zambia (incl. Zimbabwe and Mozambique)	September– December 2008 (and August 2009, October 2007)
Moldova	September – December 2005, December 2012
Angola	August/September 2005
Uganda	January/February 2005
Sudan (mainly Darfur)	June 2004 – December 2004
Bhutan	August 2001 – October 2001

14. Professional experience – Ongoing Projects

Date: from (mm/yyyy):	November 2013
to (mm/yyyy):	ongoing
Location:	Democratic Republic of Congo (North and South Kivu)
Client:	Swiss Humanitarian Aid Unit, Berne
Position:	Assessment
Description	Assessment of the situation for water borne diseases with intervention proposal for SHA for the next three years.

Date: from (mm/yyyy):	October 2012
to (mm/yyyy):	ongoing
Location:	Great Lakes Area (Rwanda, DRC, Burundi)
Client:	SDC (Swiss Development Cooperation) in Kigali
Position:	Backstopping mandate
Description	Project monitoring and technical support to water and sanitation projects targeting 160 health centres and 10 Hospitals in the area. Projects implemented by Malteser Int., Swiss TPH, and SDC

Date: from (mm/yyyy):	August 2012
to (mm/yyyy):	ongoing
Location:	Andaman Islands, India
Client:	Various foundations
Position:	Project lead
Description	<p>Natural resources management: This project addresses the problem of how to protect one of the last unspoiled biodiversity hotspots on the planet, i.e. the Andaman and Nicobar Islands, where a careful balance between judicious resource exploitation and preservation has to be found urgently and where tradeoffs between different uses and users are becoming increasingly binding in the future.</p> <p>Scoping study with the goal to develop a comprehensive project for the protection of the A&N islands. Eventually turned out in a project supporting sustainable tourism on the islands by developing a vision for a “Zero Emission Tourism” concept that should boost the development of the islands but at the same time also protect the environment.</p>

15. Professional experience – Completed Projects

Date: from (mm/yyyy):	April 2015
to (mm/yyyy):	July 2015
Location:	Aweil, South Sudan
Client:	Swiss Humanitarian Aid Unit, Berne
Position:	Team leader of the review team
Description	Given the rather complex social, political, and economic environment in South Sudan, the Swiss Agency for Development and Cooperation (SDC) pursues a project with the overall objective of “sustained improved water sector management”. The task of this assignment is to perform an external review of SDCs WASH project in Northern Bahr el Ghazal, South Sudan

Date: from (mm/yyyy):	August 2011
to (mm/yyyy):	October 2014
Location:	Tanzania
Client:	SDC (Swiss Agency for Development and Cooperation)
Position:	Project Management
Description	Low cost, high tech solutions for better water management: The project iMoMo uses mobile technology in collecting, analysing and dispersing information on water resources to provide better water resource management and planning for Pangani River Basin in Tanzania. The main tasks of hydrosolutions in the project include hydro-climatological modelling, optimizing resources management and planning, coupling information input and decision making in water resources management. Funding is from SDC under the umbrella of ‘Water Diplomacy and Governance in Key Transboundary Hot Spots’. The work is being carried out in close collaboration with the Pangani Basin Water Board (PBWB), the Tanzanian Ministry of Water Resources, water user associations and furrow as well as river committees

Date: from (mm/yyyy):	October 2010
to (mm/yyyy):	July 2014
Location:	Global Study
Client:	ETH Zurich
Position:	Project Management, researcher
Description	Research on water cooperation and conflict: Development of a new geospatial dataset for global surface waters that combines elevation models and flow accumulation approaches with new data on international boundaries to generate more precise and nuanced measures of hydro-political dependencies among riparian countries in international river basins. Hydro-political dependencies between countries are among the key factors of interest in research on international water cooperation and conflict. Quantitative research on the subject thus far uses very simple characterizations of international river geography to proxy for such dependencies, most prominently upstream-downstream vs. contiguous international river geography, which is established through visual inspection of maps.

Date: (mm/yyyy):	April 2014
to (mm/yyyy):	August 2014
Location:	China (Heihe and Handan Area)
Client:	ETH Zurich – Sino Swiss Cooperation
Position:	Research and Assessment
Description	Real time well field control system development in Heihe and Handan area. Study on groundwater related policies.

Date: from (mm/yyyy):	March 2013
to (mm/yyyy):	
Location:	Morocco
Client:	SDC
Position:	Project lead

Description	Integrated Water Resources Management in Morocco: AGIRE is a project implemented by GiZ and co-funded by SDC that aims at increasing the competencies of the water sector institutions in Morocco for an integrated and sustainable management of water resources. Backstopping mandate to represent SDC in the evaluation and planning of the 2 nd phase of the project.
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Date: from (mm/yyyy):	December 2012
to (mm/yyyy):	January 2013
Location:	Moldova
Client:	SDC
Position:	Project lead
Description	Establishment of a comprehensive assessment of the water sector in Moldova. The study serves as base to support SDC in the development of a new cooperation strategy for Moldova for the period 2014-2017, which is going to be elaborated in 2013. Activities include: Assessment of Water needs by different sectors (domestic, hydropower, industry, environment, agriculture); Stakeholder consultation (All involved agencies and ministries); Policy analysis; Draft of action plans, logical frameworks.

Date: from (mm/yyyy):	October 2011
to (mm/yyyy):	December 2011
Location:	Haiti
Client:	Caritas Switzerland
Position:	Project lead
Description	Development of an integrated water management concept for small water sheds. Management of small watersheds through compensations for ecosystem services. Objective of the project is to a) restore the destroyed natural resources environment, b) protection against inundations and droughts at the same time, c) income generating activities for individuals in a rural environment.

Date: from (mm/yyyy):	September 2011
to (mm/yyyy):	October 2011
Location:	Somalia (Somaliland)
Client:	Caritas
Position:	Project lead
Description	Analysis and evaluation of Caritas Interventions and review of current WASH infrastructure designs, construction supervision and monitoring tools. Caritas in Somaliland is one of the most important partners for the government of Somaliland with regard to water and sanitation issues. In addition to infrastructure implementation projects, Caritas consults the government in the design of the national water act, and the national sanitation policy for Somaliland.

Date: from (mm/yyyy):	March 2011
to (mm/yyyy):	May 2011
Location:	Great Lakes Area (Rwanda, DRC, Burundi)
Company:	SDC (Swiss Development Cooperation)
Position:	Project Management
Description	Feasibility study, budget and project management and backstopping for water supply projects targeting approx 1 million beneficiaries. Construction of approx 700 km of water supply networks.

Date: from (mm/yyyy):	December 2010
Location:	Grand Goave, Haiti
Company:	Swiss Humanitarian Aid Unit
Position:	WASH Expert cholera
Description	Emergency mission as water expert for three weeks. Start-up of a cholera treatment center (CTC).

	Coordination and implementation of water supply and sanitation measures in a CTC including training of personell. Water and Hygiene promotion and chlorination projects in the area.
Date: from (mm/yyyy):	June 2006
to (mm/yyyy):	December 2010
Location:	Zurich, USA (New York), Zambia (including trips to different locations in Zimbabwe and Mozambique)
Company:	Center for Comaprative and International Studies, ETH Zurich
Position:	Researcher, Ph.D. Student, visiting scholar at Columbia University and NYU in New York
Description	Analysis of the Zambezi River Basin including development of water scenarios, water allocation strategies and policy design, research on influence of political and economic power on water allocation. Project in collaboration with water authorities and stakeholders of the eight riparian countries (Angola, Botswana, Malawi, Mozambique, Namibia, Tanzania, Zambia, Zimbabwe), University of Zambia, University of Zimbabwe, Mondlane University of Mozambique.
Date: from (mm/yyyy):	October 2010
to (mm/yyyy):	November 2010
Location:	Great Lakes Area (Rwanda, DRC, Burundi)
Company:	SHA (Swiss Humaitarian Aid Unit) and SDC (Swiss Development Cooperation)
Position:	Technical Assessment Water and Sanitation
Description	Feasibility study, budget and project management for water and sanitation projects targeting 160 health centres and 10 Hospitals in the area. Target population 2.5 million people. Investment approx 8 Mio USD mainly for water supply.
Date: from (mm/yyyy):	December 2007
to (mm/yyyy):	March 2008
Location:	Zurich, USA (New York)
Company:	UNDP
Position:	Consultant, desk study in collaboration with Tobias Siegfried, Columbia University
Description	Options for Water Resources Management in Darfur, Sudan In collaboration with the UNDP in New York (2007). Analysis of the ongoing conflict in Darfur and proposal of mitigation measures with regard to Water Resources Management.
Date: from (mm/yyyy):	September 2005
to (mm/yyyy):	December 2005
Location:	Moldova (Chisinau)
Company:	SHA (Swiss Humanitarian Aid Unit)
Position:	Project coordinator
Description:	Water expert and technical consulting for the implementation of community water supply and distribution networks. Assessment and evaluation of projects proposed by the communities and to be potentially funded by SHA.
Date: from (mm/yyyy):	August 2005
to (mm/yyyy):	September 2005
Location:	Angola (Mavinga)
Company:	Médecins sans Frontières
Position:	Consultant
Description:	Evaluation of the community water supply and distribution policy in a heavily war affected area. Assessment and consulting of security related aspects in an area where access to water sources has been armed strategically by means of anti-personnel land mines.
Date: from (mm/yyyy):	January 2005
to (mm/yyyy):	February 2005
Location:	Uganda
Company:	Médecins sans Frontières
Position:	Project coordinator, water expert
Description	Design and implementation of water supply in a settlement area for refugees coming from the

	great lake area into Uganda.
Date: from (mm/yyyy):	June 2004
to (mm/yyyy):	December 2004
Location:	Sudan (Darfur, Garsila area, Mukjar, Bindisi, Um Dukhun)
Company:	Médecins sans Frontières
Position:	Project coordinator, water expert
Description:	Coordination and implementation of water supply and sanitation projects in highly congested areas due to influct of internally displaced people. Construction of wells, latrines, hygiene promotion and education. Very challenging cultural and political environment requiring a lot of very sensitive negotiation with conflict parties.
Date: from (mm/yyyy):	January 2004
to (mm/yyyy):	May 2006
Location:	Switzerland (Berne)
Company:	Herzog – Ingenieure
Position:	Hydraulic engineer (design and site engineer)
Description:	Freelance and part-time employment complementary to the work with MSF and SHA during this period. Smaller projects including high-flood protection, dam security evaluation, bridge foundation control, river and reservoir survey using GPS and echo sounding tools, construction of small dams.
Date: from (mm/yyyy):	April 2002
to (mm/yyyy):	December 2003
Location:	Switzerland (Amsteg)
Company:	Gähler und Partner Ingenieure
Position:	Site engineer
Description:	Quality control and site engineering at NEAT in Amsteg. Construction of the longest railway tunnel at this time in Europe.
Date: from (mm/yyyy):	October 2001
to (mm/yyyy):	February 2002
Location:	Zurich
Company:	ETH Zurich
Position:	Researcher (Consultant)
Description:	Management and improvement of groundwater use in northern Africa
Date: from (mm/yyyy):	August 2001
to (mm/yyyy):	October 2001
Location:	Bhutan (Wangdue Phodrang)
Company:	Helvetas
Position:	Consultant
Description:	Hydraulic engineering. PTCB Wangdue Phodrang, Design of Approach Roads Hill Slope and Riverbank Protection.
Date: from (mm/yyyy):	September 2000
to (mm/yyyy):	February 2001
Location:	Zurich
Company:	ETH Zurich in collaboration with Agro Consulting (A. Mauderli)
Position:	Desk study
Description:	Irrigation management and remote sensing of Kom Ombo, Egypt.
Date: from (mm/yyyy):	January 1999
to (mm/yyyy):	December 2001
Location:	Zurich
Company:	Staubli & Kurath
Position:	Project assistant
Description:	Project assistant for different hydraulic engineering projects. Part-time job during university.

16. Other relevant information**Employment record**

Date from - Date to	Institution, Position
November 2014 – ongoing	Self employed at Lucas Beck Ltd.
October 2010 – October 2014	Hydrosolutions gmbh, co-founder and partner
June 2006 – December 2010	Center for Comparative and International Studies, International Relations group, ETH Zurich, Switzerland
January 2004 – May 2006	Freelance – self employed
April 2002 – December 2003	Gähler und Partner Ingenieure, Baden (Amsteg), Switzerland

Golden Paragraph

Lucas Beck holds an interdisciplinary PhD degree combining International Relations and Hydrology. After obtaining a Msc in rural engineering with emphasis on hydrology in 2002, he was working in various projects as practitioner and hydraulic engineer in Switzerland and in the humanitarian context in conflict areas in Africa and Eastern Europe. From 2006 to 2010 he carried out a PhD at the Center for Comparative and International Studies at ETH Zurich. During that time he was doing extensive research on water use, water conflicts and water allocation in international river basins with extensive stays in Southern Africa and as visiting scholar at the Columbia University and NYU in New York.

Beck is the co-founder of hydrosolutions Ltd., a private enterprise located in Zurich, Switzerland. The firm specializes on providing intelligence for environmental change but also does project management and engineering related to water infrastructure. Beck is affiliated with the Center for Comparative and International Studies at ETH, the Swiss Federal Institute of Technology.

Lucas Beck is very passionate about political and societal questions related to water use where he focuses on questions of fairness, influence of political and economic power and strategies in water allocation. He is very familiar with the implementation side of water-infrastructure projects but concentrates equally on regional / national scale water resources management and planning issues with a particular focus on the assessment and mitigation of climate-related impacts on societies. He uses a variety of computational simulation methods to quantitatively assess allocation strategies given efficiency, equity and sustainability constraints. His methods are utilized for decision-making and institutional design as well as risk assessment and management.

Lucas Beck's work is interdisciplinary, with strong ties to the practical implementation of projects, the private sector and governments. In his work he gained experience in challenging negotiations related to the implementation of water projects in very sensitive and culturally diverse environments. A part from engagements in Africa, Asia, Central America and Eastern Europe, he was working within projects in Switzerland as well.

Publications (scientific)

- *Implications of hydro-political dependency for international water cooperation and conflict: Insights from new data.* Together with Thomas Bernauer, Tobias Siegfried, Tobias Böhmelt. *Political Geography* 42 (2014) 23-33.
- *Fairness in Water Allocation.* Poster presentation together with Thomas Bernauer, ETH Zurich at the annual meeting of the American Geophysical Union, San Francisco, Dec 2011.
- *How will combined changes in water demand and climate affect water availability in the Zambezi river basin?* Together with Thomas Bernauer. *Global Environmental Change*. 2011
- *Environmental, political, and economic determinants of water quality monitoring in Europe.* Together with Thomas Bernauer and Anna Kalbhenn. *Water Resources Research*, Vol 46, 2010.
- *Transboundary Water Allocation in the Zambezi River Basin.* PhD-Thesis. ETH Zurich. Mimeo, May 2010
- *Water Allocation under Hydro-political Asymmetry.* Together with Tobias Siegfried, Columbia University. Mimeo, under review CIS, ETH Zurich. 2010
- *Fair Water Allocation in the Zambezi River Basin.* Mimeo, under review. CIS, ETH Zurich. 2010
- *Transboundary Water Allocation under Hydro-Political Asymmetry.* Poster presentation together with Tobias Siegfried, Columbia University at the annual meeting of the American Geophysical Union, San Francisco, Dec 2009.
- *Studying Strategic Interactions under Hydrological Uncertainty.* Poster presentation at the North-South center at ETH in Zurich. June 2008

Publications (Newspaper Articles)

- *Ein Wasserpreis für gerechtere Wasserverteilung?* Together with Dr. Diana Soldo in *Klimafreundlich* 2, 2013, a Swiss magazine.
- *Wasserverteilung im Spannungsfeld von Neid, Gleichbehandlung und Effizienz, panta rhei* (33), Verlag Hans Erni-Stiftung, Luzern. 2012
- *Expert Interviews in the Zambezi River Basin.* CIS-News, ETH and University of Zurich, October 2009
- *Water wars and water conflicts.* article with focus on Darfur in "Tagblatt" a Swiss daily newspaper. May 2008
- *Water scarcity - no cause for wars.* (German title: "Wasserknappheit ist keine Kriegsursache"), article in "Tages Anzeiger" a Swiss daily newspaper. Together with Thomas Bernauer and Anna Kalbhenn. March 2008
- *Zambezi River - crucial for the fate of a whole region.* (German title: "Sambesi bestimmt Schicksal einer ganzen Region") article in "Tages Anzeiger" a Swiss daily newspaper. 2006
- *Lead article in "Tec21" a Swiss magazine on engineering, architecture and environment.* (German title: "Helfen mit Angst im Bauch"). 2005

Invited talks and presentations

- UNECE – United Nations Economic Commission for Europe. Fifth workshop on adaptation to climate change in transboundary basins; Geneva, 14-15 October 2014
- OSCE Security days, Vienna; Enhancing security through water diplomacy: The role of the OSCE; Panel: A security perspective on water. 8 June 2014
- Geography of Conflicts in International River Basins. University of Leipzig, Center for Area Studies. 27. June 2012
- Conflict and cooperation in international river basins. Case studies from Africa. Rand Corporation, Washington DC, 8. March 2012
- Presentation on water and conflict at the “OcCC - Symposium Anpassung an den Klimawandel, Die Anpassungsstrategie der Schweiz”. www.occc.ch 26.11.2010, Berne
- Conflict and cooperation in international water courses. (Workshop: “Hydrologische Bedeutung und Rolle des Alpenraums in Zeiten des Klimawandels”) 5. November 2010, Embassy of Switzerland in Berlin.
- Water – Challenge for the Future? Presentation at the General Assembly of the Association of Street construction contractors of the Canton of Zurich (VKZSU), February 2009
- Water - challenge for engineers and politicians. Presentation at Project21 a student association for sustainable development. Zurich, June 2008
- Water demand management in the Zambezi River Basin. Technical University of Denmark, Lyngby, Denmark. June 2007
- Water and Conflict in Darfur. Columbia University, NYC, Earth Institute. New York Dec 2006
- Engineering in emergencies. Swiss student association, AV Welfen. April 2006

Lecturing / teaching / research supervision

- GIS in Humanitarian Context. August 2013, negotiation training for water resources management, SDC.
- Integrated Water Resources Management. Introduction. 27./28. June 2012, University of Leipzig.
- Lecturer in International Environmental Politics, ETH Zurich. Spring 2011, Spring 2012
- Lecture in International Humanitarian Action and Law. As assistant of Dr. Jakob Kellenberger (ICRC). ETHZ Spring semester 2008 and spring semester 2009
- Supervision of different master thesis between 2006 and 2010 as part of the research on trans-boundary water resources

Other relevant experiences

- Consulting and speech preparation for Helen Leumann, Swiss councillor of states; Title: Water: Global challenge and a Swiss responsibility (German title: “Wasser: Globale Herausforderung und die Verantwortung der Schweiz”). 2007
- Organization of an international conference in Lucerne, Switzerland on “Water – Future challenge for peace and security?.” Lucerne Initiative for Peace and Security (LIPS) September 2007
- Statement on civilian and military cooperation in international cooperation. Federal commission for foreign policy of the Swiss Socialist Party. 2006
- Campaign marketing for different votes in Lucerne, 2007
- Event marketing and networking for the municipality of Lucerne for the concert of “White Flag” a Palestinian-Israeli band. 2005
- Work group for new educational methods, ETHZ, 2001
- President of the student association Welfen, Zurich, 1998 – 1999
- Consistory of St.Michael, Lucerne, 1992 – 1998
- Head officer in scouting, Pfadi St.Michael, Lucerne, 1993 – 1997

References: Available on request

Contact data

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