

Curriculum Vitae

Name: Lucas BECK

Date of birth: 26 February 1974

Nationality: Swiss

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)

Present positions:

- Head of Project in Zahle, Lebanon for the Swiss Cooperation/Swiss Embassy project in supporting Bekaa Water Establishment. Since March 2016
- Self employed at Lucas Beck Ltd. since Nov 2014

Membership of professional bodies:

- Board Member of the Swiss foundation for direct assistance to children affected by Aids; www.aidsundkind.ch (since 2016)
- Advisory Board Member of hydrosolutions ltd. www.hydrosolutions.ch (since 2015)
- American Geophysical 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 (2005 – 2018)
- Member of Médecins sans Frontières – www.msf.ch (since 2004)

Years of experience: 17

Key qualifications:

- Natural resources management – Environmental activities
- Development, start-up, and management of projects
- Networking
- Conflict analysis and conflict resolution concepts
- Cooperation design, mediation
- Strategy and policy development
- Evaluation and reviews

Other relevant information:

- 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 (Dialoggruppe Urs W. Studer) (2003 - 2012)

Golden Paragraph

Lucas Beck is a generalist in his field. He combines environmental engineering and international relations where he also holds an interdisciplinary PhD degree. Lucas obtained an Msc in rural engineering with emphasis on hydrology in 2002. Since then he has been working in various projects as practitioner and hydraulic engineer in Switzerland and in the humanitarian context in conflict areas in Africa, Eastern Europe, and the Middle East. 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 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.

Lucas is very passionate about political and societal questions related to water use and environmental sustainability. Specifically he focuses on questions of fairness, influence of political and economic power and strategies in the use of natural resources. He is very down to earth and familiar with the implementation side of water-infrastructure projects. At the same time he concentrates equally on regional / national scale water resources management and planning issues with a particular focus on the assessment and mitigation of human impact on the environment and vice versa. His work is utilized for decision-making and institutional design as well as risk assessment and management.

The work of Lucas 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. Apart from engagements in the Middle East, Africa, Asia, Central America and Eastern Europe, he has been working within projects in Switzerland as well.

Lucas likes to work hands on and tries to link his work with a genuine passion for nature and outdoor activities. Despite his education and experience in research and academia, Lucas remains very down to earth and likes to interact in diverse environments as close as possible to the beneficiaries of his work.

Ongoing Professional experience

02/2016 – ongoing. Head of Project office Zahle for the Embassy of Switzerland – Swiss Cooperation in Lebanon. The project seeks to enhance resilient, sustainable and conflict-sensitive water management. The current interventions aim to increase access to safe water, sanitation and the efficient use of water for food production, to improve the basis for integrated water resources management as well as mitigating water-related disaster risks and conflicts. Together with the Bekaa Water Establishment we aim at improving water management in the Bekaa Valley

12/2016 – ongoing. Cooperation design for joint water management in the Middle East. Water availability, distribution, and management in the Middle East is highly complex. Even more the social, political, and sectarian landscape in the Arab world making water management more challenging. By means of different catalysts we aim at bringing together important players in the water- and environmental sector to improve communication and cooperation.

12/2015 – ongoing. Shared water management in the Middle East. The project explores current practices with regard to handling of conflict, fairness and water sharing. At the current stage of the project we aim at drawing lessons on how to contribute to better cooperation between the different parties and across boundaries.

Past professional experience

11/2015 – 03/2016 Update of the dataset on International Hydro-Political Dependencies together with the Center for Comparative and International Studies from ETH Zurich. Further development of a new geospatial dataset for global surface waters using GIS, remote sensing, and computational models for the development of global hydrological datasets

11/2013 – 12/2015. Democratic Republic of Congo (Kivus) for SHA (Swiss Humanitarian Aid) assessment of the situation for water borne diseases with intervention proposal for SHA for the next three years.

03/2011 – 12/2015. Great Lakes Area (Rwanda, DRC, Burundi) for SDC (Swiss Development Cooperation). 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.

04/2015 – 07/2015. South Sudan for SHA (Swiss Humanitarian Aid) team leader of an external review of SDCs WASH project in Northern Bahr el Ghazal. The project deals with the overall objective of “sustained improved water sector management”.

08/2012 – 06/2015. Zero Emission Tourism on the Andaman & Nicobar Islands for various foundations. This project addresses the problem of how to protect one of the last unspoiled biodiversity hotspots on the planet. 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. Zero Emission Tourism project.

08/2011 – 10/2014. Low cost, high tech solutions for better water management, funded by SDC: 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 include hydro-climatological modelling, optimizing resources management and planning, coupling information input and decision making in water resources management. 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

10/2010 – 07/2014. 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.

04/2014 - 08/2014. China: Real time well field control system development in Heihe and Handan area. Study on groundwater related policies. Sino Swiss cooperation.

03/2013 – 04/2013. Morocco, SDC mandate: 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 2nd phase of the project.

12/2012 – 01/2013. Moldova, SDC (Swiss Development Cooperation). 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.

10/2011 – 12/2011. Haiti, Caritas Switzerland. 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.

09/2011 – 10/2011. Somalia, Caritas Switzerland. 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.

03/2011 – 05/2011. Rwanda, Burundi, DRC (Sud Kivu) for SDC (Swiss Development Cooperation). 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.

12/2010 – Haiti, for Swiss Humanitarian Aid Unit. WASH Expert cholera. 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.

06/2006 – 12/2010. CIS, ETH Zurich (whereof approx 2 years in NYC as visiting scholar at Columbia University and NYU). 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.

10/2010 – 11/2010. SHA (Swiss Humanitarian Aid Unit) and SDC (Swiss Development Cooperation). 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.

12/2007 – 03/2008. UNDP, Zurich and NYC. Consultant, desk study in collaboration with Tobias Siegfried, Columbia University. Options for water resources management in Darfur. Sudan.

09/2005 – 12/2005. SHA (Swiss Humanitarian Aid Unit) in Moldova (Chisinau). Project coordinator. 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.

08/2005 – 09/2005. Médecins sans Frontières in Angola (Mavinga). 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.

01/2005 – 02/2005. Médecins sans Frontières in Uganda. Project coordinator, water expert. Design and implementation of water supply in a settlement area for refugees coming from the great lake area into Uganda.

06/2004 – 12/2004. Médecins sans Frontières in Darfur, Sudan (Garsila area, Mukjar, Bindisi, Um Dukhun). Project coordinator, water expert. 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.

01/2004 – 05/2006. Herzog-Ingenieure, Bern, Switzerland. Hydraulic engineer (design and site engineer). 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.

04/2002 – 12/2003. Gähler und Partner Ingenieure, Switzerland (Amsteg). Quality control and site engineering at NEAT in Amsteg. Construction of the longest railway tunnel at this time in Europe.

10/2001 – 02/2002. ETH Zurich. Researcher. Management and improvement of groundwater use in northern Africa.

08/2001 – 10/2001. Helvetas in Bhutan (Wangdue Phodrang). Consultant. Hydraulic engineering. PTCB Wangdue Phodrang, Design of Approach Roads Hill Slope and Riverbank Protection.

09/2000 – 02/2001. ETH Zurich in collaboration with Agro Consulting (A. Mauderli). Desk study. Irrigation management and remote sensing of Kom Ombo, Egypt.

01/1999 – 12/2001. Staubli & Kurath, Zurich. Project assistant for different hydraulic engineering projects. Part-time job during university.

Employment record

February 2016 – ongoing	Head of Project for Swiss Cooperation in Lebanon
November 2014 – ongoing	Self employed at Lucas Beck Ltd.
October 2010 – October 2014	Hydrosolutions, 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

Specific Country experience

Middle East, Lebanon	2015 – ongoing
South Sudan	2015
China	2014
Morocco	2013
India	2012 – 2013
Tanzania	2011 – 2013
Somalia	2011
Rwanda, DRC (Sud Kivu), Burundi	2010 – 2015
Haiti	2010 – 2011
USA (New York)	2007 – 2009
Zambia, Zimbabwe, Mozambique	2008 – 2014
Moldova	2005, 2012
Angola	2005
Uganda	2005
Sudan	2004
Bhutan	2001

Invited talks and presentations

- International conference "New technologies of water treatment adapted to developing countries" at the Faculty of Science of the Lebanese University and the UNESCO-SIMEV Chair-France. Presentation about water use in the Middle East. December 2017
- Viva con Agua Switzerland – Water a global challenge. Presentation at "Neusicht – arts for water" fair. Lucerne, October 2015
- 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, Lynby, 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

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 (public press)

- *Wenn Religionen zusammenleben*. About coexistence of different religions in Lebanon, *Neue Luzerner Zeitung*, 24.12.2016
- *Ein Wasserpreis für gerechtere Wasserverteilung?* (“water price for fair water allocation?”) 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