

CURRICULUM VITAE

1. **Family name:** Kölsch
2. **First names:** Florian
3. **Date of birth:** 03.08.1963
4. **Nationality:** German
5. **Civil status:** single
6. **Education:** Dr.-Ing. (civil engineering)



Institution [Date from - Date to]	Degree(s) or Diploma(s) obtained:
MIT, Cambridge [1998/99]	(Postdoc)
TU Braunschweig [1990-1996]	Dr.-Ing.
TU Braunschweig [1983-1990]	Dipl.-Ing.

7. Language skills

Language	Reading	Speaking	Writing
English	1	1	1
Spanish, French	3	4	4

8. Membership of professional bodies:

ISWA – International Solid Waste Association,
 DGGT - German Society of Geotechnics , MIT Club of Germany
 Lower Saxony Council of Professional Engineers
 IHK - Trading and Industry Council, Braunschweig

9. Present position:

Dr. Kölsch Geo- und Umwelttechnik GmbH: Consulting Engineer and Partner
 Technical University Braunschweig, Dept. Waste Management: Scientist, Lecturer

10. **Years within the firm:** Dr. Kölsch GmbH: 16 ys., TU Braunschweig: 12 ys.

11. Key qualifications:

Technical excellence: Waste management, Waste treatment, Landfill technology, Geotechnics, CDM

Skills: Feasibility Studies, Assessments and evaluations, Concepts, Design, EIA, CDM-records (PIN, PDD), Calculation/Analysis, PSP/PPP concept and analysis, education measures, landfill design (DED)

12. Specific experience in the region:

Country	Date from - Date to

13. Professional experience

Date from - Date to	Location	Company	Position	Description
since 1996	Braun- schweig (D)	Dr. Kölsch Geo- und Umwelttechnik GmbH	Consulting Engineer/ Partner	<p><u>National Consulting</u></p> <ul style="list-style-type: none"> Monitoring projects at 20+ landfills, consulting of landfill operators Design of landfills, safety concepts, contributing to German technical regulations Concepts and design for landfill rehabilitation and closure Development and implementation of innovative waste concepts, design and monitoring of plants for the biological pretreatment of MSW and leachate <p><u>International Consulting:</u></p> <ul style="list-style-type: none"> <i>Egypt: National SWM Program - CDM expert, project identification (KfW/ERM)</i> <i>Tunisia: Landfill assessment (KfW/ICP)</i> <i>Albania, Macedonia, Kosovo: Assessment of PPP in waste management (IFC)</i> <i>Afghanistan: Composting pilot project (World Bank/Gauff)</i> <i>Tajikistan: Tajikistan Urban Environmental Profile (Asian Development Bank)</i> <i>Pakistan: Waste management concept for Bagh (EU)</i> <i>Philippines: Forensic analysis of Payatas landfill failure (ADB)</i> <i>Ecuador: Improvement of LFG project Zambiza, CDM project (Alquimiatec)</i> <i>Morocco: Rehabilitation and monitoring of Tanger landfill (GTZ/iu)</i> <i>South Africa: Integrated SWM concept Rustenburg, Bloemfontein (KfW/iu)</i> <i>Armenia: SWM City of Yerevan, landfill assessment (World Bank/Fichtner)</i> <i>Vietnam: Coastal Cities environmental sanitation program (World Bank/Fichtner)</i>
since 2000	Braun- schweig (D)	TU Braunschweig Leichtweiß-Institute für Hydraulic Engineering, Dept. Waste Management	Scientist Lecturer	<p><u>International Development projects:</u></p> <ul style="list-style-type: none"> <i>China: Methane reduced waste disposal (KfW/BMU), CDM project, MBT plant</i> <i>Indonesia: Community based public landfill monitoring (EU)</i> <p><u>International research projects</u></p> <ul style="list-style-type: none"> <i>Brazil: Safe landfills in tropic climate regions (DAAD-CAPES)</i> <i>Japan: Reutilization of old landfill sites (DFG-JSPS)</i> <p><u>International education projects</u></p> <ul style="list-style-type: none"> <i>Thailand/Vietnam: postgraduate lectures(DAAD)</i>
1998- 1999	Cambridge MA (USA)	Massachusetts Institute of Technology	Visiting Scholar	Research project on dynamical properties of biotreated waste and the potential use as an Earthquake protecting material (funded by DFG)
1990- 1996	Braun- schweig (D)	TU Braunschweig Dept. Waste Management	Research Assistant	<ul style="list-style-type: none"> Bearing behaviour and mechanical properties of waste Investigation on the rehabilitation of drainage systems of landfills Design of biological pretreatment plants for MSW and leachate

14. Other relevant information

Journal Publications

Pfaff-Simoneit, Nassour, Nelles, Kölsch (2009): Klimaschutz und Abfallwirtschaft in Schwellen- und Entwicklungsländern – Welche Chancen ergeben sich aus dem Know-How- und Technologietransfer? KA, Heft 10 (in German)

Fricke, Kölsch (2009): Waste management in low income and emerging countries. In: Bahadir, Duca (eds.): The role of ecological chemistry in pollution research and sustainable development. Proceedings of the NATO Workshop (Chisinau/Moldova), Dordrecht: Springer

Kölsch, Fricke, Müller (2007): Carbon trade project “Biological waste treatment” for Gaobeidian (PR China), *Clean*, Vol 35, Heft 5, Weinheim: WILEY-VCH

Kölsch, Ziehmman (2004): Landfill stability – risks and challenges. *Waste Management World*, issue Mai/June, ISWA, Copenhagen

Presentations

Kölsch, Ginter, Fricke (2010): German GHG Mitigation Lighthouse Project MBT Plant Gaobeidian (PR China). ISWA World Congress, HH

Bidlingmaier, Fricke, Kölsch, Werner (2008): CDM projects in waste management. Proceedings ISWA World Congress 2008, Singapore

Kölsch, Fricke (2006): Community based landfill monitoring. In: Gidarakos, Nikolaidis, Christodoulatos et al. (eds.): Protection and restoration of the environment VIII (proceedings). Technical University Chania (GR)

Kölsch, Fricke, Mahler, Damanhuri (2005): Stability of landfills – The Bandung disaster. CISA (Hrsg.): Proceedings of the 10th International Landfill Symposium, Cagliari, Sardinia (Italy) in press

Towhata, Kawano, Yonai, Kölsch (2004): Laboratory tests on dynamic properties of municipal waste. 11th International Conference Soil Dynamics and Earthquake Engineering, Berkeley (USA)

In total 50+ journal publications and presentations in German and English on waste treatment, management, landfills, monitoring, CDM

Special lectures

Worldbank (Washington, 2005): The Bandung dumpsite disaster - Problems of waste management and disposal in tropical countries. BBL seminar for Bank staff

Asian Development Bank (Manila, Philippines, 2004): Current waste management situation in different regions in Asia (Vietnam, Thailand, Tajikistan, Philippines, Japan), greenbag seminar for Bank staff

COMLURB: (Rio de Janeiro, Brasilien, 2004): Stability problems of landfills. Seminar for staff of COMLURB (**C**ompanhia **M**unicipal de **L**impeza **U**rbana, Rio de Janeiro public works)

Chulalongkorn University, (Bangkok, Thailand, 2003): Waste management and disposal. Thai/Vietnamese postgraduate class. Cooperation Vanlang University (Vietnam), Chulalongkorn University (Thailand), Bauhaus University Weimar (D), funded by (DAAD)

15. References

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16. Project references (List of international projects)

Date	Location	Funding	Project
2011-	Hebron (Palestine)	IFC	Tender for PPP transaction
2011-	Cairo (Egypt)	ERM, KfW	National Solid Waste Management Program
2010-11	Ramallah (Palestine)	KfW (World Bank)	Feasibility study on CDM/VER projects for Palestine
2010	Berane (Montenegro)	IFC	Advisory study on PSP in waste management of Berane
2010	Amman (Jordan)	Fed Min of Environment	Intergovernmental talks about CDM, waste management, disposal, biogas
2010-11	Mangaung (South Africa)	IU, KfW	Advanced Integrated Solid waste Management Concept
2009-10	Tunis (Tunisia)	ICP, KfW	Stability analysis for 10 Tunisian landfills
2009-10	Tirana (Albania)	IFC	Advisory study on PSP in waste management of Durres and Tirana
2009	Skopje (Macedonia)	IFC	Assessment of PPP potential
2009-10	Nha Trang (Vietnam)	Fichtner, World Bank	Coastal Cities Environmental Sanitation Programm; landfill design, CDM elements
2009	Yerewan (Armenia)	Fichtner, World Bank	Solid waste management concept for Yerewan, landfill assessment
2008	Rustenburg (RSA)	IU, KfW	Integrated waste management concept, CDM elements
2008	Quito (Ecuador)	Alquimatec, Greengas	Improvement of LFG project Zambiza, CDM project
2008-10	Tanger (Morocco)	IU, GTZ	Rehabilitation and monitoring of Tanger landfill -
2007	Kabul (Afghanistan)	Gauff, World Bank	Sanitation improvement for Kabul – composting pilot project
2007-08	Bagh (Pakistan)	EU	Waste management concept, design of MBT and composting plants
2006-11	Gaobeidian (PR China)	AWN, KfW/ AWN, BMU	CDM project Methane reduced waste disposal by MSW composting
2006-08	Bandung (Indonesia)	EU	Community based public landfill monitoring
2004-06	Rio de Janeiro (Brazil)	DAAD, CAPES	Safe landfills in tropic climate regions
2003	Tajikistan	Asian Development Bank	Tajikistan Urban Environmental Profile
2002-03	Tokyo (Japan)	DFG, JSPS	Reutilization of old landfill sites
2000	Manila (Philippines)	Asian Development Bank	Forensic analysis of Payatas landfill failure
1999	Norridgewock (ME, USA)	Waste Management Maine	Feasibility study for MBT plant at Norridgewock landfill
1999	St. Croix (USVI)	Gov. of the US Virgin Islands	Bird control measures at St. Croix landfill

17. Professional experience (selected, recent projects relevant to ToR)

Date: from to	since 7/2011 (ongoing)
Location	Cairo (Egypt)
Company (donor)	ERM (KFW Development Bank)
Project	National Solid waste Management Program
Position	Technical Expert
Description	Identification of projects, climate check, CDM elements

Date: from to	7/2011 - 9/2011
Location	Hebron (Palestine)
Company (donor)	International Finance Corporation IFC
Project	Feasibility study on PSP opportunities for SWM systems in Southern Westbank
Position	Consultant
Description	Assessment of PSP opportunities, tender documents

Date: from to	since 10/2008 (ongoing)
Location	Gaobeidian (PR China)
Company (donor)	AWN Umwelt GmbH (German Federal Ministry of Environment))
Project	Reduction of methane emissions by means of MBT – International Climate Initiative: lighthouse project for GHG mitigation in waste management
Position	Team Leader
Description	Establishing of a mechanical biological treatment plant 40.000 t/a (lighthouse project for climate change), rehabilitation of existing site, improvements in waste collection, transfer and delivery, pilot digestion plant (total invest: 4,3 Mio. €)

Date: from to	since 2/2010 - 6/2011
Location	Mangaung/Bloemfontein (South Africa)
Company (donor)	IU (KFW Development Bank)
Project	Advanced Integrated Solid waste Management Concept
Position	Team Leader
Description	Feasibility study on waste collection, treatment disposal options, CDM elements

Date: from to	10/2010 - 5/2011
Location	Ramallah (Palestine)
Company (donor)	KFW Development Bank in cooperation with World Bank
Project	Feasibility study on CDM/VER projects for Palestine
Position	Consultant
Description	Study on carbon trade opportunities for the Westbank

Date: from to	11/2008 - 5/2011
Location	Hebei Province (China)
Company	Technical University Braunschweig (Federal Ministry of Environment)
Project	Development of New Methodologies for waste management
Position	Team leader
Description	New Methodologies for methane avoidance in MBT plants (replacement of 1 st order decay) and for methane oxidation layer

Date: from to	5/2010
Location	Amman (Jordan)
Company (donor)	Federal German Ministry of Environment
Project	Intergovernmental talks about CDM, waste management, disposal, biogas
Position	Consultant

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Date: from to	11/2009 – 1/2010
Location	Tirana, Durres (Albania)
Company (donor)	International Finance Corporation IFC
Project	Advisory study on PSP in waste management for Tirana and Durres
Position	Consultant
Description	Feasibility study, landfill assessment, tariff structuring

Date: from to	11/2009
Location	Skopje (Macedonia), Pristina (Kosovo)
Company (donor)	International Finance Corporation IFC
Project	Feasibility study on PSP in waste management for Skopje and Kosovo
Position	Consultant
Description	landfill assessment, financing analysis

Date: from to	7/2009 - 5/2010
Location	Nha Trang (Vietnam)
Company (donor)	Fichtner (Worldbank)
Project	Coastal Cities environmental sanitation program
Position	Technical Expert
Description	Feasibility study, Detailed Engineering for landfill (incl. CDM elements), concept for waste treatment

Date: from to	1/2009
Location	Yerevan (Armenia)
Company (donor)	Fichtner (Worldbank)
Project	Advisory Study on the Municipal Solid Waste Management in Yerevan
Position	Technical Expert
Description	Feasibility study, landfill rehabilitation, PPP feasibility (incl. CDM elements)

Date: from to	12/2008
Location	Rustenburg (South Africa)
Company (donor)	iu (KfW Development Bank)
Project	FS on Advanced integrated SWM system for Rustenburg Local Municipality
Position	Technical Expert
Description	Concept of MBT options, landfill assessment, CDM elements

Date: from to	12/2006 – 12/2008
Location	Bandung (Indonesia)
Company (donor)	TU Braunschweig (EU)
Project	Community based public landfill monitoring
Position	Team Leader
Description	location: Leuwigajah dumpsite, landfill area: 30 ha, 4 Mio. m ³ , pop 3 Mio.. Duties include: establishing of community based public landfill monitoring system, education measures, data analysis, recommendation on waste disposal strategy for West-Java province

Date: from to	4/2007 – 10/2008
Location	Bagh (Pakistan)
Company (donor)	PIN (EU)
Project	Participatory waste management for Bagh
Position	Technical Expert
Description	Waste management concept, design of MRF, MBT and composting plants, design

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	of landfill (targeted population: 5000, 1500 t/a waste, total invest 500.000 €)
Date: from to	6 – 11/2007
Location	Kabul (Afghanistan)
Company (donor)	Gauff (World Bank)
Project	Sanitation improvement for Kabul Municipality
Position	Technical Expert
Description	Composting pilot project for solid waste and human excrements, redesign of waste collection system (pop 3 Mio., 800.000 t waste/a, total invest: 2,5 Mio \$)

Date: from to	8 – 10/2006
Location	Gaobeidian (PR China)
Company donor)	AWN Umwelt GmbH (KfW Development Bank)
Project	Methane minimized waste management system
Position	Team leader
Description	Feasibility study for MBT-plant. Duties include: assessment of SWM inventory, waste analysis, pre-design of MBT, pilot tests, CDM elements (3 PDDs). (targeted population: 400.000, 300 t/d waste, landfill area: 5 ha).

Date: from to	2 – 3/2003
Location	Tajikistan
Company	Asian Development Bank (independent consultant for ADB)
Project	Tajikistan Urban Environmental Profile
Position	Consultant
Description	Assessment of overall environmental situation (air, water, waste water, MSW, traffic) in Tajik cities, recommendations for the investment strategy of ADB in the environmental field in Tajikistan