

## List of Projects in Foreign Countries

- Environmental impact studies (EIA, IEE), Environmental management
- Energy efficiency, renewable energy and climate change
- Water quality, drinking water and wastewater treatment
- Waste management, waste treatment and disposal; contaminated sites
- Environmental protection in industry, Industrial audits
- Environmental financing and Credit Funds (industrial environmental protection)
- Project evaluations and monitoring
- Capacity Building and Institutional Strengthening
- Laboratory consultation and analytical quality assurance (AQA)
- Agriculture and plant protection consultation
- Other activities
- Projects in Germany

### Environmental impact studies (EIA, IEE), Environmental management

05/1998	<b>Burundi:</b> Environmental impact study for extension of the drinking water supply of the city of Bujumbura, REGIDESO, Bujumbura; World Bank, Washington
05-06/1999	<b>Pakistan:</b> Preparation of Initial Environmental Examinations (IEE) on wastewater treatment and solid waste disposal as well as estimation of water quality in the “Quetta Water Supply and Environmental Improvement Project“, Quetta; Asian Development Bank (ADB), Manila, Philippines
08/1999	<b>Haiti:</b> Preparation of an Environmental Impact Assessment (EIA) study in the field of drainage of rainwater, wastewater treatment and solid waste disposal, Port-au-Prince; Interamerican Development Bank (IDB), Washington
09-10/1999	<b>Pakistan:</b> Preparation of Environmental Impact Assessments (EIA) following ADB guidelines for additional water supply (dams), wastewater treatment, solid waste disposal and drainage and flood control in the “Quetta Water Supply and Environmental Improvement Project“, Quetta; Asian Development Bank (ADB), Manila, Philippines
01-02/2000	<b>Haiti:</b> Environmental Impact Assessment (EIA) on wastewater treatment plants, solid waste disposal sites and drainage in six provincial cities, Port-au-Prince, Ministry of Public Works; Interamerican Development Bank (IDB), Washington
10-11/2000	<b>Albania:</b> Environmental analysis on rehabilitation and expansion of a motorway Elbasan – Librazhd Project, Tirana; European Bank for Reconstruction and Development (EBRD), London
11-12/2000	<b>Burundi:</b> Initial environmental analysis on existing installations for production of drinking water and energy (power station) and foreseen for rehabilitation or extension, Bujumbura and various other cities; World Bank, Washington
06/2001	<b>Uzbekistan:</b> Environmental impact assessment on the Uzbek transport corridor Tashkent – Fergana (railway, road) for transportation of crude oil and oil products, Tashkent, Fergana; KfW Development Bank, Frankfurt
06-09/2002	<b>Oman:</b> Environmental Impact Study on a new municipal solid waste disposal site for the Muscat region; Fichtner Stuttgart; Muscat Municipality
01-02/2006	<b>Georgia:</b> Start of the Feasibility Study “Adjara Solid Waste Management Project” financed by the ‘Black Sea Investment Facility’ in the field of environmental impact assessment for a new sanitary landfill and closure of two existing dump sites for solid municipal waste, Tbilisi/Batumi; EU Commission, Brussels/EU Delegation Ukraine
04/2006	<b>Albania:</b> Feasibility Study “Water and Wastewater Project/Shkodra”: Evaluation of new locations for wastewater treatment plant concerning impacts on the environment, Shkodra; KfW Development Bank, Frankfurt
06/2006	<b>Albania:</b> Estimation of environmental impacts of the planned wastewater treatment plant as well as estimation of the risk of groundwater contamination for the northern well field, Shkodra/ Tirana; KfW Development Bank, Frankfurt

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07-08/2006	<b>Macedonia:</b> Revision of the Environmental Impact Assessment carried out for the opening of the open pit coal mine in Bitola; ELEM, Skopje; KfW IPEX-Bank, Frankfurt
09/2008	<b>Kosovo:</b> Preparation of Terms of Reference for launching a tender for an Environmental and Social Impact Assessment of an open pit lignite mine, KEK, Pristina; KfW Development Bank, Frankfurt
05/2009	<b>Kosovo:</b> Introduction of the consultant for an environmental and social impact study on an open pit lignite mine (Sibovc South West Lignite Mine) following the KfW requirements for such a study, Pristina; KfW Development Bank, Frankfurt
07/2009	<b>Benin:</b> Evaluation of environmental impacts resulting from the construction of a 310 km transmission line (161 kV) in Benin in the project „Extension of the net infrastructure in Benin in the context of the West African Power Pools (WAPP)“ (home office work); KfW Development Bank, Frankfurt
09 + 01/2010	<b>Kosovo:</b> Revision of the Environmental and Social Impact Assessment study December 2009(ESIA) on the open pit Sibovc South West Lignite Mine following requirements of KfW concerning ESIA studies; KfW Development Bank, Frankfurt
03-04/2010	<b>Vietnam:</b> Evaluation of an Environmental Impact Assessment and preparation of a fact finding mission (KfW/ADB) concerning the construction of the Thermal Power Plant O Mon IV/Can Tho (home office work); KfW Development Bank, Frankfurt
09/2010	<b>Vietnam:</b> Participation in preparation of the inception report concerning environmental impacts of bio-gas plants in the Vietnamese Bio-Gas Program “PPTA Strengthening Project Management and Developing Strategies and Options for Biogas Development Program Extension”, Hanoi, MARD; ADB, Manila
11-12/2010	<b>Thailand:</b> Support concerning the preparation of environmental e-learning programs for use at university level, Bangkok, ComCon International Co., Ltd., Bangkok
01; 03/2011	<b>Vietnam:</b> Development of environmental criteria concerning impacts of biogas plants and evaluation of environmental impacts of bio-gas plants in the Vietnamese Bio-Gas Program “PPTA Strengthening Project Management and Developing Strategies and Options for Biogas Development Program Extension”, Hanoi, MARD; ADB, Manila

#### **Energy efficiency, renewable energy and climate change**

11-12/2006	<b>Belize:</b> Consultation for the distillery Traveller’s Ltd. in the field of biogas production
07/2008	production generated from distillery wastewater in the programme “Integrated Development Program for the Caribbean Rum Sector”, Belmopan; EU Delegation, Barbados, European Commission, Brussels
06-07/2007	<b>Thailand:</b> Consultant in the field of water and wastewater management as well as in energy efficiency in northern Thailand’s saa paper industries, Bangkok, Nan, Chiang Rai, Chiang Mai; GTZ Eschborn
09-10/2007	<b>Jamaica:</b> Consultation for the distillery John Wray & Nephew in the field of biogas
01-02/2008	production generated from distillery wastewater in the programme “Integrated Development Program for the Caribbean Rum Sector”, Kingston; EU Delegation, Barbados, European Commission, Brussels
09-10/2007	<b>Haiti:</b> Consultation for the distillery Barbancourt in the field of co-generation in the programme “Integrated Development Program for the Caribbean Rum Sector” Port au Prince; EU Delegation, Barbados, European Commission, Brussels
03/2008	<b>El Salvador:</b> Evaluation of the 1 <sup>st</sup> phase of the credit line for industrial environmental protection and energy efficiency and proposals for the execution of the 2 <sup>nd</sup> phase; BMI, San Salvador, KfW Development Bank, Frankfurt
05/2008	<b>Philippines:</b> Fact-finding mission for the introduction of a credit line for energy efficiency and climate protection in the Philippines, Manila, Land Bank of the Philippines; KfW Development Bank, Frankfurt
03/2009	<b>Belize:</b> Consultation for the distillery Traveller’s Ltd. in the field of biogas production generated from distillery wastewater in the programme “Integrated Development Program for

- the Caribbean Rum Sector”, Belmopan; EU Delegation, Barbados, European Commission, Brussels
- 05-06/2009 **Thailand:** Participation on the fair: Renewable Energy Asia and Entech and presentation of a short lecture on energy efficiency in the international cooperation, Bangkok, UBS/DENA
- 09/2010 - **Vietnam:** Evaluation of environmental impacts and risks concerning different constructions of bio-gas plants in the Vietnamese Bio-Gas-Program “PPTA Strengthening Project Management and Developing Strategies and Options for Biogas Development Program Extension”, Hanoi, MARD; ADB, Manila

### **Water quality, drinking water and wastewater treatment**

- 08/1993 **Kuwait:** Drinking water and sea water contamination, oil-damage consultation, Kuwait-City; KISR
- 10-12/1993 **Pakistan:** Consultation on drinking water: Reorganization of drinking water laboratory, drinking water monitoring, laboratory financial planning, Peshawar; GTZ, Eschborn
- 11-12/1994 Training course for Algerian water specialists in the field of “Water Quality Control”, A.G.E.P., Algiers, **Algeria;** GTZ, Eschborn
- 06/1995 - 12/1997 Consultation in the field of “water quality” in the project: Support of the National Drinking Water and Wastewater Authority A.G.E.P. Phase 1a and 1b, Algiers, **Algeria;** GTZ, Eschborn
- 12/1995 - 03/1996 Enforcement of a standard practice manual for the control of water quality and water production in waterworks, Algiers, **Algeria;** GTZ, Eschborn
- 06/1996 - 12/1997 Consultation in the field of "Conception of Training Programs" in the project: Support of the National Drinking Water and Wastewater Authority A.G.E.P. Phase 1a and 1b, Algiers, **Algeria;** GTZ, Eschborn
- 08/1996 - 05/1997 Consultant in the project: Overview of fora involved in the identification of substances hazardous to the aquatic environment; Eureco, **Luxembourg;** RIZA, **Netherlands**
- 11/1996 - 01/1997 **Indonesia:** Consultant in the project: Drinking water quality surveillance, Yogyakarta and Bali, Jakarta; GTZ, Eschborn
- 01-02/1997 **Rwanda:** Consultation in the field of wastewater treatment and wastewater analyses in the project: Consultation for DEA/MINITRAP, Kigali; GTZ, Eschborn
- 10-11/1997 **Rwanda:** Development of a national strategy for the protection of drinking water in the project GTZ/DEA: “Consultancies for the Department of water and sanitation/MINITRAP, Kigali; GTZ, Eschborn
- 06/1998 Training course in the field of water pollution in the project „Contaminated soils and water” with participants from **Madagascar, Ivory Coast, Cameroon and Benin,** Berlin; Carl Duisberg Gesellschaft (CDG), Berlin
- 03/1999 **Turkey:** Advisor for the chamber of commerce in Bursa and the tannery co-operative in the field of treatment of organic sludge and production of biogas (sewage plant of the industrial zone of Bursa and new industrial zone for tanneries), Bursa; GTZ, Eschborn
- 07/1999 **Morocco:** Evaluation of base data for the dimensioning of a wastewater treatment plant for a distillery on behalf of the FODEP-Morocco, Rabat/Kenitra; Beller Consult, Freiburg
- 03/2003 **Namibia:** Evaluation and investigation of effects of industrial effluents on the wastewater treatment facilities and the water reclamation plant of the City of Windhoek; Preparation of an industrial inventory; KfW Development Bank, Frankfurt
- 01-02/2004 **Jordan:** Evaluation of treated wastewater quality for reuse in irrigated agriculture in the Jordan valley; reuse of WWTP sludge in agriculture, Ministry of Water and Irrigation, Amman/Irbid; KfW Development Bank, Frankfurt
- 01/2005 **Syria:** Assessment of the drinking water treatment facilities and investigation of the raw and drinking water quality; problem analysis and evaluation of the water quality of the wastewater treatment plant of the City of Aleppo; Water Establishment; KfW Development Bank, Frankfurt

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- 03/2006 **Albania:** Feasibility Study “Water and Wastewater Project/Shkodra”: Evaluation of the water quality of Lake Shkodra and of the drinking water abstraction well field of the city of Shkodra, Shkodra/Tirana; KfW Development Bank, Frankfurt
- 01-02/2007 **Cambodia:** Feasibility study to introduce decentralised wastewater treatment systems (DEWATS) in the country
- 06-07/2007 **Thailand:** Consultant in the field of water and wastewater management and energy efficiency in northern Thailand saa paper industries in the project “Thai-German Programme for Enterprise Competitiveness, Eco-Efficiency Component”, Bangkok, Nan, Chiang Rai, Chiang Mai; GTZ Eschborn
- 06/2008 **China:** Development of Terms of Reference (ToR) for an Environmental Impact Assessment to be carried out for the wastewater treatment sludge disposal in the project: Hebei Urban Environment Project/Shijiazhuang Sewage Treatment Component, Shijiazhuang; World Bank, Washington

#### **Waste management, waste treatment and disposal; contaminated sites**

- 1991 - 1992 **France:** Waste consultation for a metal-working facility, Le Creusot; Creusot-Loire
- 1992 **Spain:** Waste consultation concerning a waste dump site enlargement, Bilbao; City of Bilbao
- 08/1994 **Hungary:** Reformulation of the Terms of Reference (TOR) and evaluation of tender documents for the implementation of the Hungarian Municipal Solid Waste-Law, Budapest; Delegation of EU in Budapest
- 01-02/1995 Conception of a training program in the field of "Rehabilitation of Contaminated (Military) Sites" for Russian high school lecturers and university professors, **Russian Federation;** EU Commission, Brussels
- 05-06/1995 Implementation of training course for Russian high school lecturers and university professors in the field of "Rehabilitation of contaminated sites", **Russian Federation;** EU Commission, Brussels
- 04/1996 - 05/1997t Waste Management Consultant: analytical quality assurance in the project: “Strengthening of the Pan-American Network of Sanitary Waste Management“; GTZ, Eschborn; PAHO/ECO, **Mexico**
- 06-07/1997 **Ecuador:** Consultancy in the field of cut-flower production for the districts of Pedro Moncayo and Cayambe (environmental impact, solid and liquid waste municipal directives); AME, Quito; GTZ, Eschborn
- 08/1998 **Albania:** Technical report: Albania - Power Transmission and Distribution Project - PCB-Management Plan, Tirana; ECAT Tirana; World Bank, Washington
- 12/1998 **Bulgaria:** Evaluation of contaminated industrial sites within the privatization process of industrial companies, Privatization Agency, Sofia; GTZ Eschborn
- 10/1999 Accompanying a Moroccan interministerial and industrial delegation in the field of hazardous waste management and its treatment, Ministry of Environment, **Morocco;** Institute Fresenius, Wiesbaden; GTZ, Eschborn
- 09-10/2001 **Tunisia:** Census on the production of industrial hazardous waste and its final disposal; Grand Tunis, Bizerte, El Kèf, Sousse, Monastir, Gabès; ANPE, Tunis; KfW Development Bank, Frankfurt
- 04-05/2002 **Thailand:** Strategy for reduction of liquid waste (solvents) and disposal of pesticides and liquid waste from the Thai Pesticide Registration Authority (DOA/ATSD), Bangkok; GTZ, Eschborn
- 10/2003 Accompanying a group of Argentinean industrials in the fields of environmental industrial management and treatment of hazardous industrial waste, Frankfurt; Institute Fresenius, Taunusstein; GTZ, Eschborn
- 01-02/2006 **Georgia:** Start of the Feasibility Study “Adjara Solid Waste Management Project” financed by the ‘Black Sea Investment Facility’ in the filed of environmental impact assessment for a new sanitary landfill and closure of two existing dump sites for solid municipal waste, Tbilis/Batumi; EU Commission, Brussels/EU Delegation Ukraine

03-04/2006 **Sri Lanka:** Consultation in the field of collection, transportation and disposal of health care waste and development of a health care waste management plan for the Jaffna Teaching Hospital in the framework of the 'Groundwater Protection Project', Jaffna/Colombo; GTZ, Eschborn

#### **Environmental protection in industry, Industrial audits**

10-11/1994 **Colombia:** Consultation: "Clean Production" for the Association of Colombian Cut Flower Exporters, Bogotá; ASOCOLFLORES

10/1995 **Ecuador:** Audit of the cut flower enterprise AGROFLORA in the field of environmental production, pesticide- and waste management, Tabacunda, Quito; Blütenpracht GmbH, Köln

10/1997 Integrated management for small and medium sized enterprises (SME) - Guideline for the first module; Bonn, GTZ/P3U

10/1998 Proposal for inclusion of integrated environmental technologies (cleaner production) into the Industrial De-Pollution Fund of **Tunisia**; KfW Development Bank, Frankfurt

12/1998 **Bulgaria:** Evaluation of contaminated industrial sites within the privatization process of industrial companies, Privatization Agency, Sofia; GTZ, Eschborn

01/1999 Development of a technical guide and an execution plan for taking into consideration "integrated technical measures" in the Industrial De-Pollution Fund (FODEP) in **Tunisia**; KfW Development Bank, Frankfurt

04/1999 **Tunisia:** Consultation for ANPE in the field of integrated technical measures and development of an evaluation plan for consideration of these measures into the Industrial De-Pollution Fund (FODEP), Tunis; KfW Development Bank, Frankfurt

10/1999 Development of a training program in the field of industrial wastewater treatment for engineers and technicians, CITET, Tunis, Tunisia; KfW Development Bank, Frankfurt

03/2001 **Tunisia:** Initial audit of Tunisian industrial enterprises and wastewater treatment plants for certification following ISO 14.001, Tunis; GTZ Eschborn

09-10/2002 **Tunisia:** Pre-audit on environmental impacts of Tunisian enterprises (sector: chemistry) for introduction of an environmental management system; Tunis, Sousse, Sfax; GTZ, Eschborn/Tunis

01-03/2003 **Tunisia:** Pre-audit on environmental impacts of Tunisian enterprises (sector: leather and leather finishing) for introduction of an environmental management system, Tunis, Nabeul, Monastir, Sousse, Sfax; and discussion on introduction of an environmental component into the program „Mise à Niveau“; GTZ Eschborn

10/2003 Accompanying a group of Argentinean industrials in the fields of environmental industrial management and treatment of hazardous industrial waste, Frankfurt; Institute Fresenius, Taunusstein; GTZ, Eschborn

06/2005 **Egypt:** Preparation of the inception report in the "Abu Qir Environmental Hot Spots Project", RBO EEAA, Alexandria, Cairo; World Bank, Washington

08-09/2005 **Egypt:** Preparation of report on 'Industrial Audits and Feasibility Studies' and final report in the "Abu Qir Environmental Hot Spot Project"; RBO EEAA, Alexandria/Cairo; World Bank, Washington

05/2006 **Egypt:** Revision and reviewing of 'Post Completion Reports' and execution of post completion visits after implementation of technical industrial investments (cleaner technologies, end-of-pipe measures) in the project „Environmental Facility/Public Sector Industry“, Cairo, Alexandria, El Minia; KfW Development Bank, Frankfurt

#### **Environmental financing and Credit Funds (industrial environmental protection)**

09/1997 **Morocco:** Industrial De-Pollution Fund I: Development of criteria for allocation of loans, Ministry of Environment, Rabat; KfW Development Bank, Frankfurt

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02-03/1998	<b>Morocco:</b> Industrial De-Pollution Fund I: Development of technical terms of reference, revision of eligibility criteria and evaluation of dossiers for allocation of credits and loans, Ministry of Environment of Morocco, Rabat; KfW Development Bank, Frankfurt
07/1998	Consultation in the field of integrated technologies for environmentally sound industrial production in the project "Industrial De-Pollution Fund", Tunis; KfW Development Bank, Frankfurt
02-03/1999	<b>El Salvador:</b> Preparatory mission for the introduction of an Industrial De-Pollution Fund in El Salvador, San Salvador; KfW Development Bank, Frankfurt
11-12/1999	<b>Chile:</b> Pre-evaluation of a project for the introduction of a credit line to support investments in the field of industrial environmental protection, CORFO, Santiago de Chile/Concepción; Santiago; KfW Development Bank, Frankfurt
05/2000	<b>Mexico:</b> Pre-evaluation of the project "Introduction of an Industrial De-Pollution Fund" from technical and financial points of view; Nafin, Mexico D.C.; KfW Development Bank, Frankfurt
08-09/2000	<b>Peru:</b> Pre-evaluation of the project: "Introduction of an Industrial De-Pollution Fund" from technical and environmental points of view; COFIDE, Lima; KfW Development Bank, Frankfurt
09-10/2004	<b>Turkey:</b> Industrial environmental credit line: Proposals for the re-definition of the international consultant's accompanying measures; Istanbul, Ankara, Bursa; TSKB, Istanbul; KfW Development Bank, Frankfurt
09-10/2005	<b>El Salvador:</b> Actualization of the feasibility study to introduce a credit line for industrial environmental protection with special focus on 'cleaner technologies', San Salvador; KfW Development Bank, Frankfurt
05/2008	<b>Philippines:</b> Fact-finding mission for the introduction of a credit line for energy efficiency and climate protection in the Philippines, Manila, Land Bank of the Philippines; KfW Development Bank, Frankfurt

#### **Project evaluations and monitoring**

11/1995 - 02/1996	<b>Turkey:</b> Evaluation of the project: "Environmental Protection Center for Small and Medium Sized Enterprises", Ankara, Bursa, Izmir; GTZ, Eschborn
11/1996 - 01/1997	<b>Indonesia:</b> Evaluation of the project: "Drinking Water Quality Surveillance", Yogyakarta and Bali, Jakarta; GTZ, Eschborn
07/1998	<b>Tunisia:</b> Evaluation and project progress control of the project: "Industrial De-Pollution Fund", Tunis; KfW Development Bank, Frankfurt
04/2000	<b>Tunisia:</b> Technical evaluation of installations financed by the De-Pollution Fund (FODEP) from the point of view of their technical sustainability, Tunis, Sousse, Sfax; KfW Development Bank, Frankfurt
06-07/2000	<b>El Salvador:</b> Evaluation of the project: "Introduction of an Industrial De-Pollution" from technical and financial points of view; BMI, San Salvador; KfW Development Bank, Frankfurt
02/2001	<b>India:</b> Evaluation of the GTZ project: "Central Pollution Control Board (CPCB)", New Delhi, Federal Ministry of Economic Cooperation and Development (BMZ), Bonn
05/2001	<b>Tunisia:</b> Evaluation of the project FODEP I/II and preparation of FODEP III/IV, ANPE Tunis; KfW Development Bank, Frankfurt
01-03/2002	<b>Mexico, El Salvador, Nicaragua, Guatemala:</b> Evaluation of impact-monitoring instruments in the German technical and financial cooperation, Mexico City, San Salvador, Managua, Guatemala City; Federal Ministry for Economic Cooperation and Development, Bonn/Berlin
04-05/2003	<b>Thailand:</b> Pre-evaluation over the total running period of 6.5 years of the project: "Thai – German Plant Protection Project" at Department of Agriculture (Ministry of Agriculture), Bangkok; GTZ Eschborn

- 07-08/2003 **Namibia:** Evaluation of the outcome of the project: “Capacity Building for Scientific Services Division of the City of Windhoek (Gammams Laboratory)”; Windhoek; KfW Development Bank, Frankfurt
- 11-12/2003 **Indonesia:** Backstopping and preparation of the inception report in the Ex-Post evaluation of the GTZ “Area Development Project, ADP” in West Pasaman/Indonesia, Jakarta; Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (BMZ, Bonn)
- 2005 – 2010 **Caribbean Region:** Participation in the monitoring of: Integrated Development Programme for the Caribbean Rum Sector Project (Monitoring of environmental and production-relevant investments); EU Commission, Brussels
- 05/2005 - 05/2010 **Antigua, Barbados, Belize, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, St. Lucia, St. Vincent, Trinidad, and Surinam:** Monitoring of investments in the “Integrated Development Program for the Caribbean Rum Sector” to enhance the environmental conditions and the modernization of distilleries (industrial wastewater treatment, distillery up-grade); Delegation of the EU in Barbados; European Commission, Brussels
- 09-10/2006 **Tunisia:** Technical evaluation of environmental industrial investments in Tunisian industries in the framework of the 10-year (1995 – 2005) evaluation of the Industrial De-Pollution Fund (FODEP I-III), Tunis, Nabeul, Bizerte, Sousse; ANPE Tunis, KfW Development Bank, Frankfurt
- 03/2008 **El Salvador:** Evaluation of the 1<sup>st</sup> phase of the credit line for industrial environmental protection and energy efficiency and proposals for the execution of the 2<sup>nd</sup> phase; BMI, San Salvador, KfW Development Bank, Frankfurt

#### **Capacity Building and Institutional Strengthening**

- 03/1997 – 12/1999 **Thailand:** Strengthening of Agriculture Toxic Substance Division (ATSD) in the project: “Policy Reform, Regulatory and Supportive Measures for the Environmentally Sound Use of Pesticides”; Department of Agriculture (DOA); Bangkok; GTZ, Eschborn
- 09/1997 **Morocco:** Industrial De-Pollution Fund I: Consultation in the field of development of criteria for allocation of loans, Ministry of Environment, Rabat; KfW Development Bank, Frankfurt
- 12/1998 **Bulgaria:** Consultant for the Bulgarian Privatization Agency concerning contaminated industrial sites within the privatization process of industrial companies, Sofia; GTZ, Eschborn
- 04/1999 **Tunisia:** Consultancies for ANPE (Dep. FODEP) in the field of integrated Technical measures and development of an evaluation plan for consideration of these measures into the Industrial De-Pollution Fund (FODEP), Tunis; KfW Development Bank, Frankfurt
- 03/2000 **Tunisia:** Development of technical proposals for the introduction of a “Research and Development Department” in the International Center for Technology Transfer of Tunisia; Tunis, Concept Ingénierie, Tunis
- 07/2002 - 07/2003 **Namibia:** Capacity Building Program for Gammams drinking and wastewater laboratory of the City of Windhoek (team leader: chemical analyses, quality assurance, laboratory management), Windhoek; KfW Development Bank, Frankfurt
- 08/2007 - 05/2008 **Egypt:** Development of a Concept and Implementation Plan for the Improvement of Laboratory Management in HCWW and its affiliated companies within the “Water and Wastewater Management Program, Cairo; Development of training concepts for the HCWW Central Laboratories; GTZ Eschborn
- 10/2008 **Egypt:** Development of ToR and a call for Expression of Interest for the accreditation of HCWW’s Reference Laboratory and QWWC’s Central Laboratory, Cairo/Qena; GTZ, Eschborn
- 02/2009 **Egypt:** Proposal for the organisational structure, the objectives, the mandate and the ToR and tasks of the HCWW’s Reference Laboratory, Cairo; GTZ, Eschborn
- 06/2010 **Egypt:** Institutional Strengthening: Development of Task List and Mandate for the Holding Company of Water and Wastewater’s General Department of Quality Control and Environmental Assessments, Cairo; GTZ, Eschborn

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05/2011 **Egypt:** Institutional Strengthening: Development of organisational structure, business plans and links between the HCWW's General Departments: G.D. Reference Laboratory Drinking Water, G.D. Research and Development, G.D. Quality and Environmental Affairs and G.D. Reference Laboratory Wastewater, Cairo; GIZ, Eschborn

#### **Laboratory consultation and analytical quality assurance (AQA)**

03-08/1992 **Bolivia:** Laboratory consulting: Extraction and purification of natural substances from tropical plants, St. Cruz de la Sierra; University of Heidelberg

01-04/1993 **Algeria:** Laboratory consultation on wastewater: Analysis of nitrogen and phosphorous compounds as well as TOC in wastewater Project: Regional Environmental Laboratory, Algiers; GTZ, Eschborn

10-12/1993 **Pakistan:** Reorganization of drinking water laboratory, drinking water monitoring, laboratory financial planning, Peshawar; GTZ, Eschborn

09/1994 Training on-the-job on infrared spectroscopy (FTIR) for members of the drinking water agency EPEAI in Algiers, **Algeria**, Wiesbaden; GTZ, Eschborn

08-09/1995 **Brazil:** Leader of the interamerican workshop "Analytical Quality Assurance and Quality Control for Metals in Latin America" (10 participating states), Rio de Janeiro; GTZ, Eschborn; OPS/ECO, Mexico-City

12/1995 - 01/1996 Enforcement of a questionnaire to prepare the interamerican "round robin" in the field of quality control in the project "Analytical Quality Assurance and Quality Control for Metals in Latin America"; GTZ, Eschborn; OPS/ECO/**Mexico-City**

04/1996 - 05/1997 Consultant in the field of analytical quality assurance in the project: "Strengthening of the Pan-American Network of Sanitary Waste Management"; GTZ, Eschborn; PAHO/ECO, **Mexico**

01/1997 Seminar in the field of chemical analyses of water and soil in the project "Contaminated soils and water" with participants from **Benin, Cameroon, Guinea, Ivory Coast, Madagascar and Togo**, Carl Duisberg Gesellschaft, Berlin

01-02/1997 - **Rwanda:** Consultation in the field of wastewater treatment and wastewater analyses in the project: Consultation for DEA/MINITRAP, Kigali; GTZ, Eschborn

03-04/1998 **Thailand:** On-the-job training in the laboratory of environmental impact analyses of the Agricultural Toxic Substance Division (ATSD) (sampling, HPLC, analytical quality assurance) of the Department of Agriculture, Bangkok; GTZ, Eschborn

06/1998 Training course in the field of chemical analyses of water pollution in the project „Contaminated soils and water" with participants from **Madagascar, Ivory Coast, Benin and Cameroon**, Berlin; Carl Duisberg Gesellschaft (CDG), Berlin

04-05/2001 **Thailand:** Laboratory consultation in the field of laboratory accreditation, analytical quality assurance and water sampling in the project TG - PPP; Bangkok; GTZ, Eschborn

07/2002 **Namibia:** Laboratory consultation for Gammams drinking and wastewater laboratory of the City of Windhoek (team leader: chemical analyses, quality assurance, laboratory management), Windhoek; KfW Development Bank, Frankfurt

11/2002 **Namibia:** Capacity Building Program for Gammams drinking and wastewater Laboratory: Analytical quality assurance, method validation and Accreditation of the laboratory, City of Windhoek; KfW Development Bank, Frankfurt

07-08/2004 **Georgia:** Expert in the field of laboratory consulting, laboratory organization and on-the-job training in the project: Introduction of a wine quality system in Georgia, Ministry of Agriculture, Tbilisi; GTZ, Eschborn

08/2007 – 10/2008 **Egypt:** Development of a concept and implementation of a plan for the improvement of the laboratory management in the Holding Company for Water and Wastewater's Reference Laboratory and the Central Laboratories of the affiliated companies within the "Water and Wastewater Management Program", Cairo; GTZ Eschborn

12/2008 **Georgia:** Preparation of the national wine testing and control laboratory for accreditation following the ISO 17025; Tbilisi; GTZ. Eschborn

- 02/2009 **Egypt:** Preparation of the Terms of Reference for the Holding Company for Water and Wastewater's Reference Laboratory, Cairo; GTZ, Eschborn
- 06 – 07/2009 **Egypt:** Participation on the ISO accreditation inception workshop and preparation of the task list for the HCWW's General Department of Quality Control and Environmental Affairs, Cairo; GTZ Eschborn
- 07/2010 **Tunisia:** Investigation of the capacities and workload of wastewater laboratories in the project "Support of the implementation of the project ONAS IV", Tunis, Nabeul, Hammamet, Béja, ONAS, Tunis; European Investment Bank, Luxembourg
- 08/2010 **Afghanistan:** First fact finding mission for the equipping and implementation of drinking water quality laboratories in the cities of Kabul and Herat; GTZ Eschborn
- 10/2010 **Afghanistan:** Second fact finding mission for the equipping and implementation of drinking water quality laboratories in the cities of Kabul and Masar e Sharif; GTZ Eschborn

#### **Agriculture and plant protection consultation**

- 10/1994 **Colombia:** Consultation: Pesticide management and resource protection in the production of cut flowers, Sabana de Bogotá and Rio Negro, Bogotá/Medellin; Eco-Flor, various flower producers
- 10/1995 **Ecuador:** Environmental consultation in the cut flower enterprise AGROFLORA in the field of environmental production, pesticide- and waste management, Tabacunda, Quito; Blütenpracht GmbH, Köln
- 03/1997 - 12/1999 (5 months) **Thailand:** Consultant in the fields of registration of pesticides, chemical analyses of pesticide residues, waste disposal and toxicology of pesticides in the project: "Policy Reform, Regulatory and Supportive Measures for the Environmentally Sound Use of Pesticides"; Ministry of Agriculture and Cooperatives (Department of Agriculture) (DOA), Bangkok; GTZ, Eschborn
- 06-07/1997 **Ecuador:** Consultancy in the field of cut flower production for the districts of Pedro Moncayo and Cayambe (environmental impact, labor protection, municipal directives); AME, Quito; GTZ, Eschborn
- 12/1997 **Slovenia:** Consultancy for the Ministry of Agriculture in the "Slovenia Irrigation Project" (agricultural sector overview), Ljubljana; World Bank, Washington
- 04/1998 **Indonesia (Bali):** Consultancy in the field of pesticide application, Faculty of Plant Protection, University of Udayana, Denpasar, Bali; University of Udayana
- 01/2001 **Thailand:** Preparation of the second phase of the project: "Appropriate Regulatory Measures and Policy Reform for Pesticide Risk Reduction", Department of Agriculture, Bangkok; GTZ, Eschborn

#### **Other activities**

- 1993 - 1994 Determination of small contamination sources in the region of the German, **Netherlands** and **Belgian** border; various clients
- 11/1994 Training course: "German and European Environmental Legislation for Environmental Experts" with participants from **Ivory Coast**; TU, Berlin; Carl Duisberg Gesellschaft, Berlin
- 1996 - 1997 Revision and translation of ISO and CEN norms for standardization; DIN, Berlin; CEN, Brussels, **Belgium**; Geneva, **Switzerland**

#### **Projects in Germany (selection, 1989 - 1995)**

##### **Risk assessment studies (RAS) and environmental impact assessments (EIA)**

- Registration and exploration of a former ammunition filling station near Bad Harzburg; Ministry of Environment of Lower Saxony, Hannover
- Toxicological estimation of ammunition residues in water and soil; IUP, Braunschweig
- Risk assessment of an abandoned polluted area, City of Braunschweig

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- Registration, exploration and EIA of a former military airbase of the National Peoples Army near Dresden; Financial Direction, Hannover
  - Registration and exploration of former military airbases near Gifhorn (Wesendorf, Dedeltstorf); Ministry of Environment of Lower Saxony, Hannover
  - Registration and exploration of a former air force tank depot; Ministry of Environment of Lower Saxony, Hannover
  - Toxicological assessment of an area contaminated with heavy metals; City of Braunschweig
  - Pre-investigation and EIA of a polluted abandoned ammunition area in the Harz; Ministry of Environment of Lower Saxony, Hannover
  - Sanitation investigation and EIA of an area polluted with heavy metals; City of Braunschweig
  - Risk assessment and EIA of a tank depot near Dresden; IUP, Braunschweig
  - Industrial historical research for the MZ motorcycle facility; MZ Motorradwerk, Zschopau; AHU, Bureau for Hydrogeology and Environment, Aachen

#### **Other projects**

- Co-construction of an agriculturally used bio-gas unit; Farmer Hemme, Hemmingen
- Development of strategies for the reduction of pesticides in agricultural and cut flower production; Biologische Bundesanstalt, Braunschweig (Federal Biological Research Center for Agriculture and Forestry)
- Consultation: Application of pesticides in agriculture; AG Landwirtschaft and Biologische Bundesanstalt, Braunschweig
- Development of chemical-analytical methods for the determination of nitroaromatics and nitrophenols in water from abandoned polluted areas and rainwater analyses; Fraunhofer Institute, Hannover
- Investigation of leakage water for chlorophenols; City of Bielefeld, Fraunhofer-Institute, Hannover
- Laboratory consultation: Determination of pesticide residues in soft drinks; Beverage industry
- Preparation of dossiers for the Advisory Committee on Existing Chemicals of Environmental Relevance (BUA-reports); BUA, Tübingen, Fraunhofer-Institute, Hannover
- Preparation of data sheets of elemental properties of existing chemicals; IUA, Initiative for Existing Chemicals of Environmental Relevance, Frankfurt, Fraunhofer-Institute, Hannover
- Environmental industrial consultation in the new federal states; various clients
- Development of a study concept in the field of toxicology for the correspondence course "Ecological Assistant"; WBI/AFW, Bad Harzburg
- Scientific advising of the correspondence course "Ecological Assistant" in the fields of environmental chemistry, agriculture, waste, nature protection, environmental planning; IUP, Braunschweig
- Literature study: Rapid determination of explosives in water and soil; State Office for Ecology, Hildesheim, Fraunhofer-Institute, Hannover
- Evaluation of technical reports and expert opinions on former city gas production sites (Treuhand-liegenschaften) in the new federal states; IUP, Braunschweig