

CURRICULUM VITAE

1. **Name:** MANFRED
2. **Date of birth:** 29 June 1949
3. **Civil status:** Divorced
4. **Passport holder:** German
5. **Education:**

Date (from – to)	Institution	Degree(s) or Diploma(s) obtained:
09/1980 – 08/1982	Silsoe College, Cranfield Institute of Technology, Silsoe, UK	MSc Agricultural Engineering, Land Resources Management
09/1969 – 07/1972	Technical College of Bremen, Faculty of Civil Engineering, Bremen, Germany	Ing. grad. Bauingenieurwesen (equivalent BSc. Civil Engineering)
09/1979 – 07/1980	Institute for Engineering Science in Tropical Countries, Technical College of Cologne, Cologne, Germany	Not a degree course at the time, testimonial

6. **Language skills:** Indicate competence on a scale of 1 to 5 (1 - excellent; 5 - basic)

Language
German
English
Russian

7. **Membership of professional bodies:** Associated Member; Institution of Agricultural Engineers, Silsoe, UK; Associated Member; Institution of European Agricultural Engineers, Paris, France
8. **Other skills:** Computer literate: Windows 10; MS Office 2013 (Word, Excel, Access, Power-Point); MS Project 2010; MS Outlook, MS SharePoint; CROPWAT (FAO); working knowledge Q-GIZ, MapInfo, Waters, EPANET, AutoCAD;
9. **Present position:** Project Manager/ Team Leader/ Civil Engineer
10. **Years within the firm:**
11. **Key qualifications:**
 - More than 30 years of professional experience with more than **20 years of professional experience in the irrigation, agriculture and rural development sectors.**
 - Project implementation, team management; staff coaching and counterpart training; report writing.
 - Extensive experience in **strategic planning of water resources and land use**, project appraisals and evaluations, feasibility studies, conceptual and detailed design, construction and commissioning, O&M, modernisation and rehabilitation, primarily **irrigation and drainage, rural water supply systems** and roads, social and communal rural infrastructure;
 - Preparation of **feasibility studies, design, identification and formulation of EU projects (EU Project Fiche, ADB PPTA's, MCC, USAID)** and **technical proposals, TOR for procurement** of consulting services, implementation arrangements and project budgeting for donor funding (EU, ADB, AFD, MCC, UNDP/UNOPS, USAID),
 - Experience in participatory design and implementation of **irrigation, drainage, rural water supply and infrastructure works, tender document preparations** for procurement of works, goods, and services, technical specifications, engineering estimates, BOQs, and GCC in accordance with FIDIC (Red Book and MDB), EU PRAG, ADB, AFD, UNDP, MCC and USAID guidelines
 - Participatory determination of stakeholder responsibilities for management, O&M of **water related and rural infrastructure works, O&M coaching and training of public/ private entities and water organisations;**
 - **Institutional development and capacity building of public, state and private water user organisations** at scheme, community, regional and national levels, training needs assessments, preparation of training modules and implementation of capacity building activities.

12. Specific experience in the region:

Country	Date (from – to)
Cambodia	06/1997-12/1997 (intermittent)
Georgia	02/2016-05/2016
Germany	08/1967-06/1969; 04/1972-06/1974; 04-09/1980
India	01-04/2007(Orissa), 05-07/2011 (Rajasthan)
Jordan	05/2015
Kazakhstan	09/2005-12/2006; 07-08/2005; 08-11/2000
Kosovo	04-05/2011, 09/2007-02/2008; 04-05/2007; 02-03/2005
Kyrgyzstan	09/1998-12/1998
Laos	04/1996-05/1996
Moldova	09/2011 – 12/2013
Mongolia	09/2004 – 06/2005 (intermittent)
Myanmar	07/2016 – 04/2017
Nepal	05/1994; 01-10/1992
Somalia	10/1982-08/1984; 09/1984-04/1996
Sri Lanka	07-08/1993; 07-08/1992; 09-10/1991 (intermittent)
Tajikistan	09-10/2015, 02-08/2004; 01-03/2004; 04/2002-01/2004; 02-06/2001
Tanzania	06/2014 – 04/2015
Thailand	10/1994-03/1996; 10/1992-09/1994; 10/1986-12/1990
Turkey	06-07/2016
Turkmenistan	03/2002-04/2002
United Kingdom	07-09/1981: 07-09/1982
Uzbekistan	11/2008-03/2011; 05/2008-10/2008; 02/1998-04/1998
Vietnam	12/2001-02/2002; 02/1999-07/2000
Zambia	07/1974-10/1978

13. Professional experience

Date (from – to)	Location	Organization	Position	Task, Assignments, Achievements
07/2016 to 04/2017	Myanmar	Ministry of Agriculture Livestock and Irrigation/ SOFRECO, Ms Paola Clerino, Project Director, Clichy Cedex, France Paola.Clerino@sofreco.fr	Team Leader/ Irrigation Engineer 200 working days	Project Technical Operator for “Myinkun and Kanni Pump Irrigation Projects in the Central Dry Zone”, implemented by Irrigation and Water Utilization Management Department (IWUMD) of Ministry of Agriculture Livestock and Irrigation (MOALI), financed by French Agency for Development (AFD), Contract No: PIP/CON 01. Project provides (i) TA to IWUMD on rehabilitation planning, investigations, surveys and design, cost estimation and tendering; (ii) developing more inclusive and functioning user organisations for management, O&M of irrigation infrastructure; and (iii) improving performance of irrigation schemes by promoting efficient field irrigation techniques, higher value crops and more climate resilient crop production systems. Leading 7 strong team of long-term national experts and 6-strong international short-term experts. Responsible for planning and conducting Participatory Diagnostic Assessment of water user organisations, developing participatory design procedures for scheme rehabilitation, implementation of socio-economic baseline survey, staff assessment for capacity building measures, development and implementation of capacity building modules for farmers and government staffs, mentoring senior departmental management staff at national and regional levels, team management, drafting and submission of subject and project reports, budgeting and managing project funds. Lead and conduct regular weekly and monthly team and stakeholder meetings.
02/2016 to 05/2016	Georgia	Ministry of Agriculture of Georgia/ Egis Eau, Montpellier, France, Mr Badre Lanedri, Project Director, Badre.LANEDRI@egis.fr	Team Leader/ Civil Engineer/ Project Manager 77 working days	Loan Consultant for the World Bank/ Ministry of Agriculture funded “Supervision of Civil Works under the Irrigation and Land Market Development Project (ILMDP) – Irrigation and Drainage Improvement Component (IDIC), Contract Ref No: IDIC/CS/QCBS/01. Leading 18 strong team of multi-national supervision experts overseeing rehabilitation of three irrigation schemes that include river weir structures, concrete lined and earth canals, siphons with barrel sizes of up to dia. 1.4m, concrete galleries, cross regulator structures and secondary canal off takes. Lead the tender design quality review and reporting; proposed/planned design modifications to improve water control and management. As Project Manager represent the employer/MoA on three works contracts (Zeda Ru, Kvemo Samgori, Tbisi Kumisi irrigation schemes) totaling some 10 Million USD. Managed three site supervision teams, established QA Plan, procedures and data formats; reviewed/ approved contractor’s work planning, work methods and material usage statements; established measuring of works, quality control, and certification of payment procedures. Lead and conduct regular weekly and monthly meetings with contractors and employer. Prepared inception, monthly, quarterly reports for submission to MoA/Client.
09/2015 to 10/2015	Tajikistan	European Union Delegation Tajikistan Base Assistència i Assessorament (BAa Consultors S.L)Spain Ms Clara Raich Project Manager craich@baaconsultors.com	Senior Integrated Water Resources Management Specialist 33 working days	FWC COM 2011 - LOT 1: Studies and technical assistance in all sectors DCI-ASIE/2015/360-210/1: “Provision of Technical Assistance to support the identification and formulation of a Rural Development Programme within the frame of the Multi-annual Indicative Programme (2014-2020)”. Three strong team, preparing the irrigation, WSS, and watershed management interventions including Logical Framework, SWOT analysis and RISK assessment, indicative budget and implementation modalities with potential partners including WB/ PAMP II, SDC, and NGOs within the foreseen Zarafshan Valley programme area.

06/2015 to 07/2015	Turkey	ADB/ EPTISA Servicios de Ingeniería, 28037 Madrid (Spain) Ms Burcu Aras, Deputy Project Director baras@eptisa.com	Backstopping RBM & WRM Institution Specialist / Team Leader 10 working days	Ten working days for detailed desktop review and editing of documents prepared by team members and forming the draft final report for the ADB funded TA-8647: Water Resources Management in Pyanj River Basin PPTA Consultants (47181-001). Assessment of document quality and status of due diligence activities, revision of reporting structure, timeline for completion of deliverables.
05/2015	Jordan	Dorsch International Consultants GmbH, Landsberger Strasse 368, 80687 Munich, Germany	Irrigation and Drainage Consultant 14 working days	Two weeks tender preparation supporting the proposal writer and contributed the methodology for participatory planning and design of water resources infrastructure.
06/2014 to 04/2015	Tanzania	USAID/ Mott MacDonald Inc., Westwood, MA 02090, USA; Mr Will Knowland, Project Director will.knowland@mottmacinc.com	Irrigation Feasibility Study Team Leader 209 working days	Development and Implementation of Irrigation and Rural Roads Infrastructure Project (IRRIP 2), Task Order number AID-621-TO-12-00002, under the USAID Global A&E IQC (Contract No.: EDH-I-00-08-00023-00). Financing Agency: USAID Feed the Future Program (FTF) Managing team of local (up to 35) and international (up to 15) specialists to conduct Feasibility Studies in 4 areas with gross area of approximately 44,000 ha in Kilombero Valley/ Morogoro District. <ul style="list-style-type: none"> • Prepared Project QA and due diligence system. • Conducted feasibility studies including flood risk modelling, drainage and flood protection works and drainage pump stations, environmental and social studies, economic cost-benefit studies, conceptual design of weir structures, river side off-takes, irrigation layouts for gravity and centre pivot systems, • Scheme management and agricultural studies including crop handling, storage, processing, and mechanization studies, cadastral studies, site specific topographic surveys, hydrological fieldwork, geotechnical and hydrogeological investigations, reconnaissance studies of hydropower and dams requirements. • Collaborate closely with the Rufiji River Environmental Flow Assessment Consultant (UNESCO-IHE) determining basic river flows for maintaining aquatic plants and lifeforms, wetlands, human water demand and availability for other purposes including irrigation and recreational. • Coordinated on-the-job capacity building activities with counterpart staff of the Zonal Irrigation Office (ZIO) in Morogoro. Guided the GIS and mapping experts preparing contour maps using LiDAR, SRTM, and Landsat imagery. • Fostered stakeholder participation. • Project Reporting
08-10/2012	Kazakhstan	IAK Agrar Consulting GmbH, Mr Alfred Kather, Project Director iakleipzig@iakleipzig.de	Consultant for the evaluation of irrigation programmes 10 working days	Deutsch-Kasachischer agrar-politischer Dialog (German-Kazakh Agricultural Policy Dialogue) funded by the German Federal Ministry of Food and Agriculture. Intermittent study and review of implementation reports for the „Irrigation and Drainage Improvement Project/Phase I“(IDIP1) and of selected planning documents for a follow-up „Irrigation and Drainage Improvement Project/Phase II“ (IDIP2). Prepared a report for use by the German-Kazakh Agricultural Policy Dialogue and presentation to KazAgro Innovations and involved in planning of IDIP-2. The report details recommendations for adoption of standards, procedures and methodologies including use of specific tools and equipment that promote sustainable and cost effective utilization of project implemented irrigation works and that had proven effective in implementation of comparable projects supported by international funding agencies.
09/2011-12/2013	Moldova	MCC/ GOPA Worldwide Consultants, Bad Homburg, Germany	Team Leader 559 working days	Project Implementation Manager (PIM) for the Irrigation Sector Reform Activity (ISRA) and the Central Irrigation Sector Rehabilitation Activity (CISRA) of the Transition to High Value Agriculture (THVA) Project, Millennium Challenge Account (MCA), Financing Agency: US Millennium Challenge Corporation Appointed Project Implementation Manager to act on behalf of the Project Executing Agency (MCA).

		Mr Eugen Diemel-Rellecke, Director Eugen.Diemel-Rellecke@gopa.de		<p>Conceptual and detailed design of 11 pressurized pipe irrigation systems covering about 15,500 ha and their construction, overall investment US\$ 62 million.</p> <ul style="list-style-type: none"> Managed team of national & international experts providing oversight supervision of consultants in accordance with MCC/MCA policies & procedures. Coordinated activities of the hydraulic, the SCADA and electrical, the pumps and mechanical, and the contract management expert in preparing technical reviews and recommendations, and oversaw implementation by the design consultant Prepared & monitored Irrigation Activities Master Implementation (IAMI) Work Plan harmonizing work plans of consultants & contractors. Conducted regular stakeholder and consultant coordination meetings. Oversight supervision of ISRA consultant establishing River Basin Management (RBM) principles in the Min. of Environment, formation of RBM unit, and development of a multi-stakeholder RBM plan for Nistru River. Oversight supervision, technical pre-clearance, and approval of design consultant's and works contractor's deliverables: <ul style="list-style-type: none"> proposed design options, conceptual designs for system rehabilitation, modernisation and improved hydraulic network operating pressure at farm turnouts, technical investigations, infrastructure asset and defects register; topographic, geotechnical, water quality, river runoff surveys design process for rehabilitation/ modernisation of pumping stations, flood protection works, design and tender drawings for all pressure pipelines, mechanical and electrical installations, BOQs, engineer's estimates, general/ particular specifications, Oversaw, reviewed and endorsed/edited development of irrigation system Operation Manuals and User Guides, Technical Project's Verification Reports, Consultants and Contractors progress reports. Updated Environmental & Social Management, and Health & Safety Plans. supported procurement activities - reviewed service contract TORs, prepared RFPs and IFBs for construction contracts (FIDIC Red Book); attended bid openings and tender evaluation panels for service and works contracts; mitigated disputes between Consultant/Contractor and Client; Oversaw the Construction Supervision Consultant, reviewed and approved work plans, progress reports, interim quantity assessments and payment requests, contract variation requests and orders, attended on site pressure tests. Prepared all contractual subject, quarterly & annual reports.
05-07/2011	India	European Commission Egis International, Mr Jean-Marc Roussel, Jean-Marc.ROUSSEL@egis.fr or Mr Jean-Pierre Mahe Jean-Pierre.MAHE@egis.fr	Irrigation Expert 35 working days	<p>Technical Assistance for the EU State Partnership Program with Rajasthan (Europe Aid/122210/C/SVIIN/14). The main project features are State-wide water sector reform and improvement with the Water Sector Policy Action Plan translated into Medium-Term Expenditure Framework; Institutional coordination and devolution for IWRM and Implementation of Water Policy action plan achieved; Enhanced water supply and groundwater recharge in selected areas with user groups equipped for IWRM; IWRM, equitable and improved access/ quality to DWSS achieved in selected blocks; and in selected blocks the groundwater situation, coverage and service delivery standards improved. Reviewed existing irrigation scheme feasibility, design and construction documents with focus on technical parameters and design criteria, cropping pattern, main system water delivery and field irrigation methods (gravity, sprinkler, drip, and trickle), system water management and operational efficiency, role of users groups. Advised SWRPD on capacity building programmes for irrigation sector staff at different institutional levels and on promoting service-driven department-community interaction in line with the Policy and Action Plan requirements for IWRM. Reviewed current water management and field irrigation practices on minor irrigation schemes and prepared advice on role of WUA's, the role of women and their relationship with the poor and other disadvantaged groups. Advised on crops and water requirements, crop resistance to low water quality conditions, resilience to drought and local cultural constraints. Prepared training module 'Efficient Water Use in Agriculture', and contributed to module 'Situation Analysis in Gram Panchayats'. Visited Indra Gandhi Nahar Canal for reconnaissance level impact assessment of SCADA installations on canal operations. Prepared review and mission reports</p>

03-05/2011	Kosovo	European Commission AGRECO GEIE, 1050 Brussels Mr Dario Valerio, dario.valerio@agreco.be	Water Resources Management Specialist 28 working days	Technical Assistance for the preparation of the TOR's for Water Sector Strategy for Kosovo (<i>letter of contract n° 2011/260720</i>), under FWC BENEf 2009 EuropeAid/ 127054/C/SV/Multi – Lot 6: Environment. Assistance to Department of Water Resources of Ministry of Environment and Spatial Planning adopting the EU Water Directive and for engaging international TA to develop an IWRM conform water strategy. Prepared Project Fiche, TOR and budget for the EU service tender "Support to the Ministry of Environment and Spatial Planning in water management and monitoring of water resources" (IPA 2010 funding under PRAG). Organized and conducted stakeholder workshop about mission focus and composition of draft TOR prepared.
11/2008-03/2011	Uzbekistan	ADB/ Egis International, Montpellier, France, Mr Denis Carra, Director Water Resources, Energy and Environment; Denis.CARRA@egis.fr	Team Leader/ Irrigation & Drainage Engineer 579 working days	Land Improvement Project (LIP) funded under ADB Loan-2245/2246-UZB with focus on Land and Agricultural Improvement of three demonstration farms (500 ha each); Capacity Building of Land and Water Management Institutions at regional and local level, WUAs and farms representatives; Rehabilitation and Modernisation of I&D systems for 160,000 ha; Project Management in support of PMO project implementation; M&E; social-environmental impact assessment. Initial funding US\$ 76 million, increased to US\$ 130 million in 2011. Overall management of consultant's team (34 national and up to 9 international experts) at Central PMU and three provincial PIUs. Project coordination and regular conducted team/stakeholder/client meetings reviewing technical aspects, work progress and implementation risk mitigation measures. Supervised 9 engineering teams preparing drainage design studies, tender drawings for drainage canals, culverts, bridges, drop structures, and drainage pump stations for drainage water re-use in irrigation. Oversaw and supervised preparation of tender documents comprising GCC, tender drawings, BOQs, engineering estimates, general and particular specifications. Coordinated and supervised preparation of training plans, identification of target institutions and capacity of Basin Irrigation Service Agency (BISA) staff, WUA and farmer representatives; conducted on-the-job training of PMO staff on ADB procurement guidelines and procedures for ICB and NCB procedures. Participated in tender committees, oversaw evaluation of bids and preparation of bid evaluation reports for procurement of goods, works and consulting services. Supervised and oversaw the activities of the Resident Engineer on site, contractor's requests for contract variations and their implementation, approving contractor's construction and as-built drawings, review and no-objection approval of contractor's interim/ final quantity assessments and payments, interim acceptance of works. Prepared monthly, quarterly, annual reports, project activity plans and timelines, identified key and critical path tasks and resource requirements.
05-10/2008	Uzbekistan	ADB/ Egis International, Montpellier, France; Mr Denis Carra, Director Water Resources, Energy and Environment; Denis.CARRA@egis.fr	Irrigation & Drainage Engineer 131 working days	Water Resources Management Sector Project, funding ADB PPTA 7061-UZB. Rehabilitation of pump irrigation projects, improvement of water management, the introduction of WUAs, and promotion of institutional reform; as well as preparation of feasibility studies suitable for Bank financing, total estimated funding frame US\$ 146 million. Contributed to the economic sector analysis and develop a water sector strategy, and a road map, and the investment. Leading role identifying and prioritizing core sub-projects for investment, estimated subproject investment needs for primary and on-farm water distribution and drainage systems. Developed measurement and data-acquisition systems to improve on-farm water management operations and potential supervisory control and data acquisition (SCADA) interventions, calculated subproject water requirements for irrigation and leaching. Assisted the hydraulic structures engineer and pumping systems specialist with design criteria for tender design and estimation of investment requirements. Prepared guidelines for an O&M manual covering rehabilitated canals and pressurized pipe distribution systems, flow control structures, mechanical, pump and electrical installations. Prepared the Irrigation and Drainage and Design Engineering sections of feasibility studies for core subprojects and ensured compliance with national standards. Contributed to inception, interim and final report.
09/2007-02/2008	Kosovo	UNDP CBEI Project, Government Building, Mr Thomas Dedeurwaerdere thomas.dedeurwaerdere@undp.org or cbei.ks@undp.org	Advisor 109 working days	Capacity Building for European Integration (CBEI) Project funded by European Union/European Agency for Reconstruction (EAR) and implemented by UNDP Kosovo. Provided assistance to the Permanent Secretary and mentoring of Ministry of Agriculture Forestry and Rural Development (MAFRD) Irrigation & Drainage Section for water resources planning and development of a Kosovo irrigation strategy (Agriculture and Rural Development Plan 2007-13). Identified and promoted rational division of institutional responsibilities for water resources infrastructure works between MAFRD and the Ministry of Environment and Spatial Planning (MESP). Advised on and monitored implementation of EU standards and norms in the Kosovo water resources sector. In coordination with MAFRD, MESP and EAR established eligibility criteria to identify and select irrigation

				schemes for investment prioritization, monitored contracts for implementation of rehabilitation work. Developed TOR for procurement of TA services by EAR, and reviewed TA outputs on behalf of EAR & MAFRD.
04-05/2007	Kosovo	European Commission Danish Agricultural Advisory Service, Mr TorbenHuus-Bruun landscentret@landscentret.dk Tel: +45 8740 5000	Irrigation Engineer 45 working days	Rural Economy Studies (funded under EU FWC 04KOS01/05/05/001) – Identification and Formulation mission related to the European Agency for Reconstruction's (EAR's) 2007 Rural Development Programme and focus on Institutional strengthening and capacity building; Putting in place regulatory and legal development of rural enterprises; Helping to attract domestic and foreign investment; Sustainable development as an important component of poverty reduction. Member of a 5 strong multinational team. Prepared an irrigation related proposal for Ministry of Agriculture, Forestry and Rural Development (MAFRD) and IPA funding under Multi-annual Indicative Financial framework (MIFF) and European Partnership Action Plan (EPAP). Reviewed and assessed the irrigation situation in Kosovo including the multi-purpose Iber-Lepenc Irrigation system providing water for agriculture by open channel systems to gravity operated sprinkler networks, hydropower generation, industrial purposes, domestic uses and human consumption. Prepared on behalf of Irrigation Providers and WUA's an investment project, TA budget, TOR, project fiche, logical framework and procurement notice, titled " <i>Demonstrate to farmers, MAFRD, credit institutions and grant funding agencies the process of adopting cost-effective irrigation practices for crop production in the changing economic environment in Kosovo</i> ".
01-04/2007	India	ADB/ NIRAS-SCANAGRI A/S Mr Niels Thorsen (retired), Project Director, NTH@NIRAS.DK or niras@niras.dk	Irrigation and Water Resources Specialist 75 working days	Orissa Integrated Irrigated Agriculture and Water Resources Management Project (funding ADB PPTA 4815-IND) at the Department of Water Resources (DoWR), India. The main focus was on preparation of a feasibility study acceptable to Orissa State government and suitable for ADB loan funding using a Multi-Tranche Financing Facility (MTFF). Project features included identifying criteria and developing a strategic framework for irrigated agriculture and associated institutional development; to expand draft Detailed Project Reports (DPRs) prepared by Orissa Department of Water Resources (DOWR) with feasibility and safeguards assessments; define institutional actions for better service delivery and integrated water resources management (IWRM); Developed intervention package comprising sector strategy, institutional actions, project synthesis with sample DPRs, cost and financing including phasing, implementation arrangements and procedures, management information system, and risk analysis. Specific tasks assigned and executed:(i) Assess performance of irrigated agriculture projects, synthesize good practices and lessons learned; (ii) Advised DOWR on quality of DPRs and due diligence that includes availability of water resources; cropping patterns; water requirements at field and main intake levels, present and post-project water losses in reservoir operation, canal conveyance capacity, field application techniques; selection criteria and design of facilities for rehabilitation; (iii) Advised on opportunities and options for enhancing water distribution and utilization efficiency, design alternatives (gravity versus pressurized)and improved system management tools using computer supported data management; (iv) Advised on technical constraints in expanding groundwater irrigation; (v) Within the frame of the irrigated agriculture development strategy, advised on appropriate O&M management, effective monitoring of system performance, planning and implementation of maintenance works; (vi) Reviewed DOWR performance executing basin wide and scheme based planning of O&M, undertaking assessment and mitigating environmental risks, its role in re/construction, undertaking QA/QC, M&E, research and operating laboratories as well as its administrative functions such as employment, staff promotion, field deployment of staff, supervision, communication/ transportation; (vii) Prepared draft irrigation framework strategy focussing on development of four river basin water organisations in Orissa State; (viii) Prepared 6 sub-project feasibility studies suitable for Bank loan funding of irrigation schemes rehabilitation and improvement (total about 40,000 ha) and including catchment runoff estimates, reservoir routing, crop water requirement assessments, and field irrigation methods, hydraulic review of main canals and selected structures, results of participatory walkthrough surveys, structure condition assessment and structure designs, indicative quantity calculations and cost estimates of rehabilitation and improvement works; (ix) Jointly with the Command Area Development Agency (CADA) of DoWR prepared programme for tertiary level irrigation development; reservoir, system and field water management procedures; cost of system O&M to WUAs and DOWR.
09/2005-12/2006	Kazakhstan	ADB/ Posch & Partners Consulting Engineers, Innsbruck, Austria;	Project Coordinator, Design and	ADB and Kazakhstan national budget funded Rural Area Water Supply and Sanitation Sector Project (ADB Loan 2006-KAZ), total funding frame US\$ 65 million. Main features of the project comprised (i) water supply systems rehabilitation including water intakes (river side and well fields), pumping stations, raw water treatment facilities, storage reservoirs, transmission and distribution pipelines, public standpipes, and private connections for about 80 subprojects with a total funding frame of about

		Mr Fritz Schweiger, Managing Director, schwaiger@pap.co.at or office@pap.co.at Tel: +43 512 282848	Procurement Specialist 328 working days	US\$ 32 million; (ii) development of a Capacity-Building and Training Program to be carried out by the Committee for Water Resources (CWR) with central and local government staff and stakeholders to strengthen their capacity to plan, implement, operate, and maintain the WSS systems. Tasks assigned and executed: Project Management and overall management of international and local consultants, operation of Central and 3 provincial PMUs; Developed and established QA system and due diligence, project planning, monitoring and reporting procedures; In coordination with national PMU engineers identified information requirements and established criteria for identification and selection of WSS subproject to be rehabilitated; developed a rapid appraisal procedure for identification of engineering requirements, and initial environmental examination (IEE) of rural water supply systems, and trained PMU engineers in application, practice and interpretation of results; Assisted CWR conducting tender procedures for procurement of works contractors, chaired bid evaluations and prepared bid evaluation reports to Client and ADB, participated in tender negotiations and contract mobilization procedures; Reviewed, approved and authorized concept designs and tender design drawings prepared by PMU engineers for construction of WSS's, the collation of tender documents for NCB and ICB procedures including general and particular technical specifications, BOQs and confidential sub-project cost estimates; Guided, oversaw and monitored the activities of the construction supervision consultants and site engineers, review and approval of work implementation plans and their updates, progress reports, work measurements and field testing of works completed, works acceptance procedures; Liaised with the Ministry of Health and regional health offices on identifying/ implementing public health and sanitation activities within schools and settlements; Organized and conducted training workshops on WSS technical, operational and financial matters for staff of the CWR; Prepared monthly reports, quarterly and annual reports to Client and ADB, overall and 6-monthly updates of timelines and budgets for selected WSS's on behalf of and for endorsement by Client; assisted CWR in preparing loan withdrawal applications to ADB.
07-08/2005	Kazakhstan	European Commission AFC Consultants Ms Petra Heinen Project Director Petra.Heinen@afci.de Tel: +49-228-98579-0	Irrigation and Drainage Engineer 28 working days	Environmentally friendly Development in Kyzylorda Oblast (EDIKO), funding EuropeAid/115541/C/SV/KZ. Short term assignment related to project result 8: Integrated Water Resource Planning and Management decision support system (IWRPMDS) developed for Syr Darya basin, Kyzylorda Province. Tasks executed: Conducted a system performance review for selected irrigation and drainage network reaches; Assessed maintenance and rehabilitation requirements of main, secondary and tertiary canal and drainage works, defined quantities of work and prepared technical specifications; Defined procurement procedures with reference to EDF regulations and PRAG; Prepared a technical report (technical note 10) on monitoring and controlling sediment in gravity operated canals; Conducted workshop for oblast water organisation staff (BVO Syrdarya-Aral, RGP Kyzylorda Vodkhoz), and WUA representatives on mission findings and technical note 10.
02-03/2005	Kosovo	European Commission Agrifor Consult, Mr Daniel Legrand, info@agrifor.be	Irrigation Engineer 25 working days	Two-person identification and formulation mission "Tertiary Irrigation Funding Project", EU Framework Contract no. AMS/451, Lot 1. Identifying criteria for investment and selection of eligible sub-projects and focus on promoting WUAs, Assessed and quantified system rehabilitation, and O&M requirements; Prepared a project outline, Logical framework and ToR for procurement of TA; Developed packages for procurement of works, supplies and services under EU rules (EC external actions) including grant funding of NGOs; Attended several stakeholder workshops for participatory formulation of project objectives and for acceptance of proposed project ToRs.
09/2004-06/2005	Mongolia	European Commission IAK Agrar Consulting Dr.DiethardRudert and Mr Alfred Kather, iakleipzig@iakleipzig.de	Hydro-Engineer 88 working days	EU – TACIS funded "Development of Agricultural Services Project", funding EuropeAid/114625/C/SV/MN. Three short term missions totalling 4 months. Assessed the physical state of well points for domestic water supply, livestock watering and minor irrigation on site; Jointly with herder families prepared sub-project proposals, and technical planning documents to request donor funding; Developed technical specifications, estimated cost of works, prepared procurement packages for drilling of boreholes, procurement of submersible pumps, and drip, trickle and low pressure sprinkler irrigation equipment; Drafted TOR for engagement of a national consultants to train rural residents and semi-nomadic herders in field irrigation methods; Drafted guidelines for water point O&M by user groups including an assessment of social and financial benefits of water points; Conducted training workshops on management of water points, O&M techniques, pump operation and field irrigation methods for user groups; Prepared mission reports and technical working papers.
02-08/2004	Tajikistan	ADB/ Northumbrian LTD, UK, Mr Chris Mathias	Team Leader/ Irrigation and	Water Resources Development and Rehabilitation Project, funding ADB PPTA 4143-TAJ. Main project features: increasing the income of rural communities through improved farm productivity, provision of reliable irrigation supplies within project districts;

		(retired); chris_mathias@compuse.rve.com or ulg@ulg.co.uk	Drainage Expert 132 working days	improved access to safe water for rural communities; policy initiatives to support Project implementation and sustainability, production incentives, establishment of support unit in MWRLR for water user association activities, and capacity building for MWRLM staff. Funding frame US\$ 32 million. Prepare a project proposal suitable for ADB loan funding and focussing on sustainable improvement of living standards for the rural population, and to increase the income of rural communities through (i) rehabilitation of irrigation and drainage infrastructure and to improve water management; (ii) improvement of selected potable water supply systems; (iii) support for agricultural development; and (iv) project management, monitoring and evaluation. The Project will also support policy reforms with regard to farm profitability, and cost recovery for O&M. Overall project management, lead team and coordinated activities of 6 international and 10 local consultants plus support staff; managed the project office and project finance. Prepared a feasibility study and conceptual designs for rehabilitation of domestic and irrigation water supply systems. Reviewed performance of irrigation schemes, identified criteria for prioritizing and identified infrastructure works for rehabilitation. Determined implementation modalities, as well as consulting services and TA requirements. Organized stakeholder consultations and participated in meetings and workshops. Prepared inception, mid-term and final reports in English and Russian languages.
01-03/2004	Tajikistan	ADB/ Scanagri Denmark A/S scanagri@scanagri.dk – now NIRAS-Scanagri – Mr Niels Thorsen (retired), NTH@NIRAS.DK or niras@niras.dk	Irrigation and Drainage O&M Specialist 45 working days	Farm Debt Resolution and Policy Reforms Project, funding ADB ADTA 4052-TAJ. Main features of the national sector project: focussing upon farm debt resolution strategies, policy and legal analyses related to agricultural reforms and cotton marketing arrangements, the second one on Ministry of Water Resources and Land Reclamation (MWRLR) institutional analyses, financial management systems, and recovery of O&M costs for rehabilitated/ improved water delivery systems. Reviewed proposals for irrigation scheme O&M, propose division of technical responsibilities between system users and supervisory institutions. Detailed mechanisms for improving O&M of irrigation and drainage systems, and institutional improvements at scheme and district levels. Assessed system O&M cost for gravity and pump irrigation schemes, determined institutional cost of O&M, prepared WUA fee structures and fee collecting mechanisms with focus on promoting IMT to water user organisations.
04/2002-01/2004	Tajikistan	UNOPS, RESS Division, Palais des Nations, 1211 Geneva, Switzerland; Mr Christophe Bouvier registryRESS@Unips.org and ChakibBelhassan ChakibB@unops.org	Officer In Charge/ Area Manager 429 working days	Reconstruction, Rehabilitation and Development Programme (RRDP). Long term UNDP post-conflict and peace building programme seeking to overcome the effects of the 1992-97 armed civil conflict by (i) promoting formation of community and local government institutions, (ii) providing equal opportunity employment to members of conflict parties, (iii) rehabilitation and construction of rural and community infrastructure (water supplies, irrigation networks, pump stations, roads, bridges, health posts, school and community buildings), (iv) skills training and capacity building at community level including for entrepreneurship. From June 2003, in charge of 4 regional offices (70 professional / 40 support staff), and responsible for overall programme and staff management, programme delivery, planning and formulation, and overall reporting. Until May 2003, Area Manager Kulyab region and Agricultural Advisor. Liaised with local government authorities, international donors (ADB, ECHO, SIDA, USAID), Ministry of Agriculture, and Ministry of Water Resources and Melioration. Promoted Community Based Organisations (Jamoat Development Board) and user organisations for management of irrigation and water supply systems. Preparation of designs, technical documentations, BOQs, technical specifications, confidential cost estimates, and tender documents for community based rehabilitation of rural infrastructure works. Guided CBO (Jamoat), WUA leadership and Gender equality training and capacity building activities. Appointed UNDP focal point for all ECHO funded water projects. Attended and approved tender proceedings, oversaw implementation of construction contracts, established due diligence and QA procedures, supervised site engineers, work acceptance and payment of contractors. As Agricultural Advisor monitored policies pertaining to the Governments' Poverty Reduction Strategy; promote and train national staff on methodologies and techniques for irrigated agriculture.
03/2002-04/2002	Turkmenistan	European Commission NIAB, Dr John Hutchins, john.hutchins@niab.com	Irrigation and Drainage Specialist 22 working days	EU funded project "Support to the Cotton Sector" in Turkmenistan. Establishment of fields for experimental cotton growing, contour mapping, land levelling. One month assignment to train local staff, plan and oversee the grid surveying of fields for experimental cotton growing including contour mapping and land levelling. Reviewed field irrigation practices and the irrigation infrastructure, prepare a detailed listing of maintenance needs and related costs, a farm water balance to forecast and monitor monthly and short-term water requirements for irrigation including rainfall contributions and drainage discharge (FAO's CROPWAT).

12/2001-02/2002	Vietnam	Lux-Development, 1, rue Emile Bian, , Mr Ferdinand A. Koos, Director, askld@lux-development.lu	Senior Consultant 54 working days	Grand-Duchy of Luxembourg funded “Nghe An Rural Development Project (NARUDEP)”, project reference <i>VIE/007</i> . Provide assistance to DARD and the Donor in completion of project phase 1 and the phase 2 formulation mission. Phase 1 components are in the fields of agriculture (2 gravity, 1 pump irrigation system), social infrastructure (1 electrification, 1 water supply scheme) and capacity building for O&M of aforementioned systems and establishment of community organisations for O&M. Reviewed on-going training activities in Project Cycle Management and initiatives to establish user based O&M for irrigation and water supply systems. Oversight construction supervision and final acceptance of irrigation, water treatment and water distribution works and pump stations. Provided information and technical support to a Phase 2 Project formulation mission.
02/2001-06/2001	Tajikistan	ADB/ Mott MacDonald Ltd, Mr J. H. Perry, Director Water and Environment, tel. +44 1223 463500	Irrigation & Drainage Engineer 87 working days	‘Agriculture Rehabilitation Project’, funding ADB PPTA No. 3514-TAJ, total estimated funding frame USD 43 million. Identification of priority areas for ADB assistance, farm privatisation, advisory services; cost-effective rehabilitation of irrigation and drainage systems, focusing on critical main and field level infrastructure, establishment of WUA’s, monitoring environmental impacts; provision of water supply and sanitation facilities and mechanisms for sustained O&M of facilities. Reviewed design, construction and water management practices for irrigation and drainage schemes, and O&M arrangements. Assessed rehabilitation requirements for prioritised & critical I&D works and pump stations. Reviewed pump irrigation systems, determined energy requirements for lifting water up to 300m and calculated cost of pumped water. Jointly with the WUA Specialist assessed institutional capacities in the water resources sector. Proposed division of technical responsibilities between system users and supervisory institutions (phased IMT), including organisational structure and cost of O&M. Prepared a proposal for rehabilitation of irrigation and drainage works (US\$ 25 Million), implementation arrangements, cost of works, user fee structure and collecting mechanisms. Inception, specialist and progress report writing.
08/2000-11/2000	Kazakhstan	ADB/ AFC Consultants Ms Petra Heinen Petra.Heinen@afc.i.de	Irrigation and Drainage O&M Specialist 67 working days	“Institutional Development and Policy Reform for Improving Water Management”, funding ADB ADTA No. 2946-KAZ Reviewed O&M procedures and division of technical responsibilities between system users and supervisory institutions. Delineated operation responsibilities for supervisory institutions and water users and detailed institutional restructuring requirements. Assessed institutional costs of O&M, and unit rates for works in system O&M. Detailed organisational structure of WUAs, WUA fee structure and collecting mechanism with a focus on IMT to users. Demonstration of decision support software WATERS (Utah) and SIMIS (FAO) for scheme management.
02/1999-07/2000	Vietnam	European Commission Food & Agriculture International (FAI), Mr Edward J A’Bear, Managing Principal;	Rural Engineer 360 working days	‘Cao Bang – Bac Kan Rural Development Project’, funding EU – ALA 97/17, Contract Number VNM/B7-300/97/17-01. Assist Vietnam’s human development, targeting the poor, and to facilitate environmental protection and disaster preparedness; culture and education; and good governance. Improving the living standards of the rural poor by broadening their production base through improving the rural infrastructure, promoting forestry as well as nutrition and health at community level. Work undertaken: Responsible for the technical and engineering components of the project, rehabilitation and new construction of irrigation and water supply works, rural roads and dirt tracks, agricultural storage facilities, rural market stalls, health posts, schools and communal buildings, QC, and environmental mitigation measures. Oversaw and managed sub-office in Bac Kan and six national engineering specialists. Responsible for preparation of sub-project feasibility and design studies, tender drawings and document, participated in bidding procedures for works contracts, contract negotiations and award of contract. Promoted user managed facilities, user based systems O&M and procedures for system IMT to users (WUAs). Responsible for liaison with and progress reporting to DARD.
09/1998-12/1998	Kyrgyzstan	ADB/ Danagro Advisor A/S, Granskoven 8, 2600 Glostrup, Denmark, Mr Niels Thorsen (retired), dan@carlbro.dk (old); now NTH@NIRAS.DK or niras@niras.dk	Irrigation and Rural Engineer 90 working days	Agricultural Area Development Project, funding ADB PPTA No. 3017-KGZ. Planning mission with large irrigation/ drainage rehabilitation component, mainly gravity and irrigation supply/drainage pump stations. Technical review of agricultural/ rural infrastructure works on 300,000ha irrigable area (mainly gravity, some sprinkler irrigation), establishing Chu river water balance, and environmental assessment. Outline planning for rehabilitation of irrigation systems and soil reclamation (salinity, water logging) and land management (soil conservation, erosion control, flood protection). Assessment of institutional capacities for system O&M and recommendations for IMT to users (pump & gravity operated systems). Demonstration of SIMIS (FAO) as management support and decision making tool, estimating cost of works.

02/1998-04/1998	Uzbekistan	ADB/ DG Agroprogress Int. GmbH, now InterProjects GmbH, Dr Helmut Bonarius (retired); info@interprojects.de Tel: +49 69 7560010	Specialist for Water Management & Irrigation 66 working days	Agricultural Sector Development Project, funding ADB PPTA No. 2498-UZB. Planning mission with large gravity irrigation and pumped drainage rehabilitation component including WUA development. Review the present situation of the agricultural sector in Uzbekistan; identify problems and mitigating measures including opportunities for Bank supported projects improving the resource base of the rural population and specifically with regard to irrigation and drainage and rural water supplies. Responsible for the irrigation/drainage and rural water supply aspects of the project. Reviewed impact of gravity and sprinkler irrigation on soil salinity and drinking water quality. Prioritized components for structural rehabilitation and improvement of rural infrastructure works. Prepared a feasibility study (40,000 ha irrigable area) including water balance, crop water requirements and irrigation scheduling (CROPWAT). Reviewed institutional capacities of regional water organisations for construction and system O&M, scheduling of work and personnel. Prepared draft TOR for key personnel in irrigation management organisations.
06/1997-12/1997	Cambodia	European Commission Agri-Consulting S.A., Mr Ettore Fontana, info@agricosultingeurope.be	Rural Engineer 22 working days	'PRASAC' Evaluation and Formulation Mission (KHM/B7-3000/IB/98/0181). Two short-term missions to review the rural engineering aspects of the project (gravity and pump/tube well operated irrigation, water harvesting, storage and supplies, buildings, roads) with special attention to institutional requirements and development, capacity building and training. Reviewed the water management aspects and project environmental impact, prepared technical recommendations, estimate detailed cost of works, draft TOR for further studies and TA personnel.
04/1996 – 05/1996	LaoS	Nam Theun 2 Electricity Consortium, Mr Grahame Applegate ntectkk@loxinfo.co.th	Irrigation Expert 30 working days	Detailed Nam Theun II environmental impact and resettlement study including irrigation potential assessment of resettlement sites. Undertook reconnaissance level assessment of irrigation potential on resettlement sites of the Nam Theun 2 hydro-power project and at Khammoune, Muang Gnommarat. Determination of infrastructure rehabilitation and construction requirements and indicative cost estimates. Mission report and TOR for further investigations
10/1994-03/1996	Thailand	Paschal GmbH, 77790 Steinach, FRG	Company Representative 360 working days	Private sector company representative, conducted business on behalf of company; advised potential clients on concrete forming techniques and application of PASCHAL formwork systems, acquisition.
10/1992-09/1994	Thailand	European Commission BELGROMA, Jozef De Smet, Head of Overseas Dept.	Senior Design Engineer 476 working days	'Huai Mong' Pump Irrigation Project (Phase II), project EU ALA TH/8613. Implemented by the Agricultural Land Reform Office (ALRO). Coordinated, managed and oversaw activities of a seven strong team of national irrigation and drainage, mechanical and electrical engineers, soils and geophysics specialists. Responsible for conceptual and detailed design of rural infrastructure and tertiary level irrigation works for 8,500ha net irrigable area including 400 km distribution canals, 230 km rural and embankment roads (hard surfaced, earth tracks) and flood protection banks, 200 canal structures with and without flow regulating devices, road structures and auxiliary works; BOQ's, confidential engineering estimates, collation of tender documents, general and particular specifications based on PRAG. Established QA system and procedures for materials and work acceptance. Development of environmental safeguards related to seasonal river flood flows and internal project area inundation. Led construction supervision team, managed site engineers, monitored contractor's progress of work, approved contractors construction schedules and work plan updates, reviewed and recommended approval of contract variations, assessed contractor delivered quantities of works, interim and final payment requests, guided Client in work acceptance procedures, issue of certificates, final contract payment. Prepared a design report, quarterly progress reports to the Client and oversaw preparation of bid evaluation reports. Attended tender procedures, bid openings and bid evaluation procedures.

01/1992-10/1992	Nepal	European Commission DG Agroprogress Int. GmbH, now InterProjects GmbH, Dr Helmut Bonarius; info@interprojects.de	TL / Rural Development Specialist 182 working days	EU funded 'Arjun Khola Rural Development Project'. Oversaw all project activities, operation of project office, and coordinated the activities of the Nepalese TA specialists and counterpart staff. Guided and oversaw introduction of fuel saving stoves, rats and vermin safe grain storage containers, biogas and sanitary installations at village and household level. Bid evaluations for engagement of national consultants. Responsible for coordination of sub-consultants undertaking field surveys – topographic, alignment and grid surveys, soils and soil nutrient surveys, catchment surveys for runoff assessment and stream flow calculations. Works contract management and construction monitoring (weir, sluice gates, headwork, canals, canal structures, river protection and erosion control and gabion works). Guided WUA establishment and oversaw WUA legal registration and ownership transfer of irrigation system infrastructure to WUAs.
07-08/1993 07-08/199 209-10/1991	Sri Lanka	Deutsche Welthungerhilfe (GAA), Bonn, FRG	Programme Planner/ Irrigation Engineer 66 working days	Deutsche Welthungerhilfe funded 'Waguruwela Tank Rehabilitation Project'. Three project support missions at annual interval to assist the Sri Lanka Freedom from Hunger Campaign Board of the Ministry of Agriculture to establish planning and implementation procedures with emphasis on beneficiary participation. Monitored annual project progress including Sri Lanka Freedom from Hunger Campaign Board promotion of participatory planning procedures for rehabilitation of tank reservoir structures (embankments, intake and outlet structures and catchment areas). Prepared annual mission and final reports
10/1986–12/1990,	Thailand	GITEC CONSULT GmbH, Bongardstr. 3, 40479 Duesseldorf, Germany; Dr Bergen; gitec@gitec-consult.de	TL / Maintenance Expert 1019 working days	KfW funded Maintenance of Irrigation Projects and Operation (MIP&O); TA in support of a loan to the Royal Irrigation Department for procurement of equipment, plant and machinery to be used in system O&M of irrigation infrastructure on two large scale and 56 smaller ones comprising some 200,000 ha irrigation area, 1,100km canals, 1,500km agricultural and rural roads, 200km embankments and river levees, and 4,500 structures with and without flow regulating devices. As Team Leader represented the project and GITEC in Thailand, lead a team up to five strong of two national long term and four international short term consultants. Provided assistance to the Royal Irrigation Department (RID) in budgeting for, costing and time planning of irrigation infrastructure maintenance comprising recurring servicing of mechanical and electrical components, seasonal and annual/regular structure maintenance, irregular and emergency system maintenance and component rehabilitation. Planned, organized, monitored and evaluated work and time studies of manual and equipment based maintenance activities for standardizing work team performances and development of unit rates of work in maintenance of irrigation systems. Identification of criteria for determining equipment suitability, selection and including defining equipment specifications for procurement of plant and machinery. Developed and contributed algorithms for use in a computer based equipment management system for registration of defects on irrigation infrastructure components, calculation of work volumes, scheduling of equipment, estimation and monitoring of equipment operating costs. Prepared detailed guidelines for use by administrators, technical staff and engineers of the RID and related to inspection of irrigation infrastructure, recording component deficiencies and work requirements, material, time and resource requirements for the execution of works in maintenance. Prepared of progress, subject and annual reports.
09/1984 04/1986	Somalia	ActionAid UK, London, UK	Programme Manager 398 working days	The primary concern was the overall water situation in the region and its availability to pastoral population and livestock as well as for gardening activities during semi-sedentary periods. All works implemented with the full participation of the nomadic population including development of surface and rock catchments for collection of rainfall runoff, undertaking tree planting exercises and development of micro catchments for tree belts, establishment of tree nurseries around school facilities, bunds across sloping lands for prolonged runoff retention, building infiltration galleries across ephemeral streamlets.
10/1982–08/1984	Somalia	Weidleplan Consulting GmbH, Dr Hans Neumayer, info@weidleplan.de	Irrigation Engineer 455 working days	African Development Bank funded 'Rehabilitation of Jannale-Bulu Maretra Irrigation Project' and 'Rehabilitation of Afgoi-Mordile Irrigation Project'. <ul style="list-style-type: none"> • Hydraulic design of tertiary irrigation canals, flow regulating structures, field outlets, • Design of supplementary works, such as livestock watering points, wash stands on irrigation canals, • Undertake topographic (profile and area grid) surveys for mapping existing distribution works and layout of rehabilitation/modernisation works, • Preparation of bills of quantities.

07/1974– 10/1978	Zambia	German Volunteer Service, Berlin, FRG	Project Eng./ Volunteer 1021 working days	Seconded to the Municipal Councils of Chingola and Kabwe (Broken Hill) to support the World Bank funded 'Squatter up-grading and Low-Cost Housing Programme'. Later on transferred to Kawambwa Rural Council to head the road maintenance unit and to supervise road bridge construction over the Lufubu river.
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Training received:

- The Practical use of the 1999 **FIDIC Conditions of Contracts** as modified by the MCC Conditions of Particular Applications and the Management of Contract Claims and Disputes, conducted by Robert A Cochrane MA DipArb FICE FCILT FCIArb Senior Associate, ECV Ltd., Workshop Chisinau/ Moldova, June 25 to 29, 2012;
- **ADB Workshop on Project Performance Management System**, Astana, Kazakhstan, April 24 to 28, 2006,
- United Nations Tajikistan, **Security Workshop for Area Security Managers**, Office of the UN Field Security Coordination Officer for Tajikistan, February 27-28, 2003.