

## CURRICULUM VITAE

PRESENT POSITION: Executive Engineer, International Section, Norwegian Water Resources and Energy Directorate, Oslo, Norway

NAME: REPP, KJELL

DATE OF BIRTH/  
NATIONALITY: 15 May 1949  
Norwegian

CIVIL STATUS: Married, 2 children (1980, 1983)

EDUCATION: 1972 Equivalent, B.Sc., University of Oslo  
1979 M.Sc., University of Oslo  
1998 National Defence Academy, Norway

OTHER TRAINING: - Seminar on arctic technology, The Norwegian University of Technology, 1978, Spitzbergen  
- Models as a tool in water resources planning, seminar at the Institute of Technology, 1982, Norway.  
- Resources and the environment in developing countries, seminar at the University of Oslo, 1983.  
- Project Management, training course 1985, Norconsult A.S.  
- Seminar on low cost water supply and sanitation. Recent development and experience, N. Soc. of Ch. Eng., 1987.  
- Applied Hydrology in the Development of Northern Basins, Greenland, 1988.  
- Course in computer assisted project planning and management, Oslo 1995.  
- Extensive team building and management programme 2001-2002, NVE.

LANGUAGES: Norwegian (fluent), English (fluent), German (fair) Kiswahili (limited), French (limited)

COUNTRIES WORKED IN: Tanzania, Kenya, Antarctica, Lesotho, Papua New Guinea, Rep. of South Africa, Turkey, Honduras, Ethiopia, Timor-Leste, China, Malawi, Vietnam, Namibia, Zambia.

PROFESSIONAL SOCIETIES: Norwegian Society of Chartered Engineers  
Nordic Association for Hydrology  
European Geosciences Union (national representative)

### KEY QUALIFICATIONS:

Major practical experience covers administration of national water resources organizations including operational hydrology, hydrological data evaluation, hydrological analyses, water balance studies, hydrological modelling, erosion and sediment transport, and initiation of research projects. Special competence has been gained on flood forecasting/flood management, and on integrated water resources management.

#### Among recent major assignments:

Course on erosion and sediment transport in Vietnam (Hanoi, 2005). Hydrological Adviser to the Project Assistance in Developing the Management of the Power Sector in Timor-Leste, with special emphasis on integrated water resources management (2004-2005). Project Manager on the National Water Development Project, Catchment Rehabilitation and Protection Program, Malawi (1999-2001). Adviser to the Inter-American Development Bank (1997) Chief Technical Adviser/Project Manager to the UNDP/WMO project PNG/88/005, Strengthening of the Water Resources Assessment and Management in Papua New Guinea (1989-92). Advisory Hydrologist to the Department of Water Affairs, Lesotho (1989). Advisory Hydrologist to the NORAD project TAN-055, Water and Sanitation Development, Rukwa and Kigoma Regions, Tanzania (1983-89). Lecturer at the post-graduate NORAD-course "Hydropower Development" at NTH, Trondheim, 1987-89, on the topics "Environmental impacts caused by hydropower development" (40 hrs) and "Hydrology" (1993 – to date ), (40 hrs). Member of a number of International Conference Organizing Committees and Scientific Committees. Hydrological Adviser to the Permanent Representative of Norway with WMO (1998-2004) 10 years of experience from arctic environments (Spitzbergen, Antarctica, and Greenland), including research work in the following fields: Glaciology, Hydrology, Meteorology, Erosion and Sedimentation. 25 years of experience from water resources management and hydrological research work in developing countries.

## EMPLOYMENT RECORD:

- 2004 - Norwegian Water Resources and Energy Directorate, International Section  
Executive Engineer
- Hydrological Adviser to the Project Assistance in Developing the Management of the Power Sector in Timor-Leste
  - Project Coordinator, Cooperation Agreement with National Energy Regulator, Republic of South-Africa
  - Project Coordinator, Cooperation Agreement Regional Electricity Regulators Association, Southern Africa
  - Project Manager, Flood Control Master Plan, Oriental Mindoro, Philippines
  - Project Coordinator, New Energy Programme, Republic of South Africa
  - Project Manager, Rusumo Falls Hydropower and Multipurpose Project, Expert Opinion on Hydrology and Sedimentation
- 1998-2004 Norwegian Water Resources and Energy Directorate, Hydrology Department  
Director
- 1993-98 Norwegian Water Resources and Energy Directorate, Hydrology Department
- Section Manager, Water Balance Section
  - 1997- Project Coordinator, Hydrological studies and institution building, Ministry of Water, Ethiopia.
  - Consultant to the Inter-American Development Bank, Ecologic Studies of Parque Nacion Tigua, Honduras, with focus on hydrometeorological conditions in "cloud forest" (tropical mountain rain forest), (1997)
  - Consultant to NATO on the establishment of a satellite based observation system for snow surveillance and its application in Turkey (1996-1998).
  - Senior Hydrologist, Tanzania Power VI Project: Feasibility Study for Hydropower Projects. Joint venture Norconsult Int. /Swedpower (1996-97).
  - Appraisal mission to Republic of South Africa, Sept.1995. Assessment of the hydropower potential in the provinces of Natal and Transkei.
  - NORAD-Resource person at the East African Water Resources Seminar in Entebbe, Uganda, 23-28 May 1993.
  - Consultant to World Meteorological Organization, Geneva, Switzerland (1994). Preparation of a paper on "Natural Disasters and Sustainable Development of Small Island Developing States" for the "Global Conference on Sustainable Development of Small Island Developing States", in the Barbados, April 1994 (presented by the WMO Secretary General).
- 1989-92 WMO-UNDP
- Chief Technical Adviser/Project Manager, PNG/88/005. Strengthening of the Water Resources Assessment and Management in Papua New Guinea (Integrated Water Resources Management) (stationed in Port Moresby, Papua New Guinea).
  - Overall project management
  - Planning, administration and coordination of an extensive training programme for all staff of the Bureau of Water Resources, PNG (BWR).
  - Lectures and group training in hydrometric network operation and maintenance, data collection, processing and analyses.
  - Review and advise on national hydrometric network development in PNG, including new instrumentation and satellite telemetry.
  - Advise on environmental impact studies, development regulation and compliance monitoring related to mining, forestry, gas and petroleum exploration and development, and coffee industry.
  - Preparation of Draft Water Quality Criteria for Papua New Guinea.
  - Advise on the review of the Water Resources Act.
  - Preparation and implementation of catchment management plans.
  - Adviser to the Government during the re-structure of the Dept. of Environm. and Conservation.
- Joint funding by New Zealand Government and UNDP.
- 1987-89 Norwegian Water Resources and Energy Administration, Oslo, Norway

- Senior Water Resources Engineer
- Adviser to NORAD on hydrological investigations in relation to small-scale hydropower development in Lesotho, Southern Africa.
- Adviser to NORAD on water resources development in Kigoma and Rukwa Regions, Tanzania
- Planning and implementation of water resources investigations in Arctic Norway (Spitzbergen).
- Chief national delegate to the Sahel Forum on State-of-the-Art of the Hydrology and Hydrogeology in the Arid and Semi-Arid Areas of Africa, 18-23 February 1989 (Conference funded by NORAD).

1980-87 Norconsult A.S., Norway; Hydrologist

1984-,  
Advisory Hydrologist, TAN 055 - Phase III. Water Supply and Sanitation Development, Kigoma and Rukwa Regions, Tanzania.

- 1984-86,
- Extended hydrological studies including hydraulic modelling at the Dept. of Civil Eng., University of Dar es Salaam. Kihansi River, Rufiji Basin, Tanzania.
  - Low flow studies related to water supply planning in Kigoma and Rukwa regions in Tanzania.

Stationing abroad:

1982-83, Tanzania  
Deputy Project Manager and Senior Hydrologist, Rufiji Basin Hydropower Master Plan.

- Establishment and calibration of new hydrological and meteorological stations.
- Quality control of data.
- Analyses and comparisons between long-term and short-term hydrometric records in order to assess and compare the different hydropower potentials in the Kilombero Valley, Rufiji Basin.
- Studies of sediment transport.
- Administration and coordination.

Client: NORAD/Rufiji Basin Development Authority (RUBADA), Tanzania

1982-83, Tanzania  
Hydrologist, Feasibility and Pre-Investment Study on small scale Hydropower Development in the Rukwa and Kigoma Regions.

- Quality Control of existing hydrological data.
- Hydrological analyses in order to assess water availability for hydropower production.

Client: NORAD/Tanzania Electric Supply Company (TANESCO)

1980-81, Tanzania.  
Senior Hydrologist, Water Master Plans for Rukwa and Kigoma Regions:

- Checking of hydrometric stations and discharge measurements.
- Checking and updating of existing and new data.
- Calculations of discharge rating curves and runoff.
- Analyses of flow duration, rainfall frequency, and relationship between pan evaporation and Penman  $E_o$ .
- Low flow studies for the purpose of water supply planning.
- Water balance assessment.

- Studies of sediment transport.
- Hydrological modelling.
- Training of counterpart hydrologists.

Client: NORAD/Ministry of Water and Energy, Tanzania.

- 1978-79 Norwegian Water Resources and Electricity Board, Hydrological Division; Hydrologist
- Analyses and preparation of glacio-hydrological data.
  - Editing of final report.
- 1977 Lectures in arctic hydrology at Symposium on Arctic Ecology and Environment at Spitzbergen, arranged by the University of Trondheim, Norway.
- 1976 Lectures on hydrology at Folsö School of Agriculture, Telemark, Norway.
- Water discharge measurements
  - Processing and analyses of data
- 1974-78 Short-term assignments for the Institute of Geography, University of Oslo.
- Preparation of hydrological and sedimentological data for publication.
- 1976-77 Researcher at the Norwegian Antarctic Expedition.
- Isotope studies for assessment of snow accumulation and snow stratigraphy.
- 1976 Team Leader of a topographical field mission to Nordaustlandet, Spitzbergen.
- 1974-75 Researcher at the Norwegian-American Antarctic Expedition to Ellsworth Mountains.
- Studies of Quarternary geology and snow stratigraphy.
- 1973-74 Senior Research Assistant at the Research Station of Spitzbergen.
- Overall responsibility for the scientific work carried out at the station.
- 1968-73 Short-term assignments as a surveyor for the Norwegian Polar Institute, including sea-mapping and land surveying.
- 1968-79 Short term assignments for the Norwegian Water Resources and Electricity Board.

#### PROFESSIONAL PUBLICATIONS:

"Snow Accumulation and Snow Stratigraphy on Riiser-Larsen-isen, Dronning Maud Land, Antarctica", 1978.

"Glaciological Investigations in Norway 1978", 1979 (Editor).

"Glacier Surface Lakes in Spitzbergen", 1981.

"Wind Power Potential in the Kigoma and Rukwa Regions, Tanzania", 1983.

"Hydrology in relation to water supply implementation", a supporting paper to the seminar on Implementation of Rural Water Supply and Sanitation in Tanzania, 1986, Arusha.

"Oxygen Isotopes and Accumulation Rates at Riiser-Larsen-isen, Antarctica", 1986.

"Glacier Hydrology of Bayelva, Spitsbergen", 1988.

"Low Flow in Rukwa Region", 1989.

"Climate related research in Svalbard," 1990.

"Water Resources in Papua New Guinea. An analysis of the Hydrometric Network", 1992.

"Sediment Transport Monitoring in Papua New Guinea, Case Study: OK Tedi Copper Mine", 1992.

"The challenge to incorporate chemical, biological, and sediment components into environmental assessment", an invited paper to the Stockholm Water Symposium 1994.

"The 1995-flood in south-eastern Norway. Operational forecasting, warning and monitoring of a 200-year flood." Presented at the North American Water and Environment Congress. Destructive Water, Anaheim, California, 24 - 28 June, 1996. American Society of Civil Engineers.

"Flood Zone Mapping at NVE". Notat Nr. 11, 1996 (in Norwegian)

"The Water Resources of La Tigra National Park", 1998.

"Dams in a European Context", 2001.

"Hydrological development aid; factors of success or failure", Nordic Hydrological Association, 2002.

2 presentations at the 3<sup>rd</sup> World Water Forum, Kyoto, Japan, 2003 (not published).

"Water Resources Monitoring and Organization in Timor-Leste", 2005

In addition various technical reports (30-40), mainly on hydrological topics, from developing countries (1981-1989).

15<sup>th</sup> August 2005

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(Holders signature)