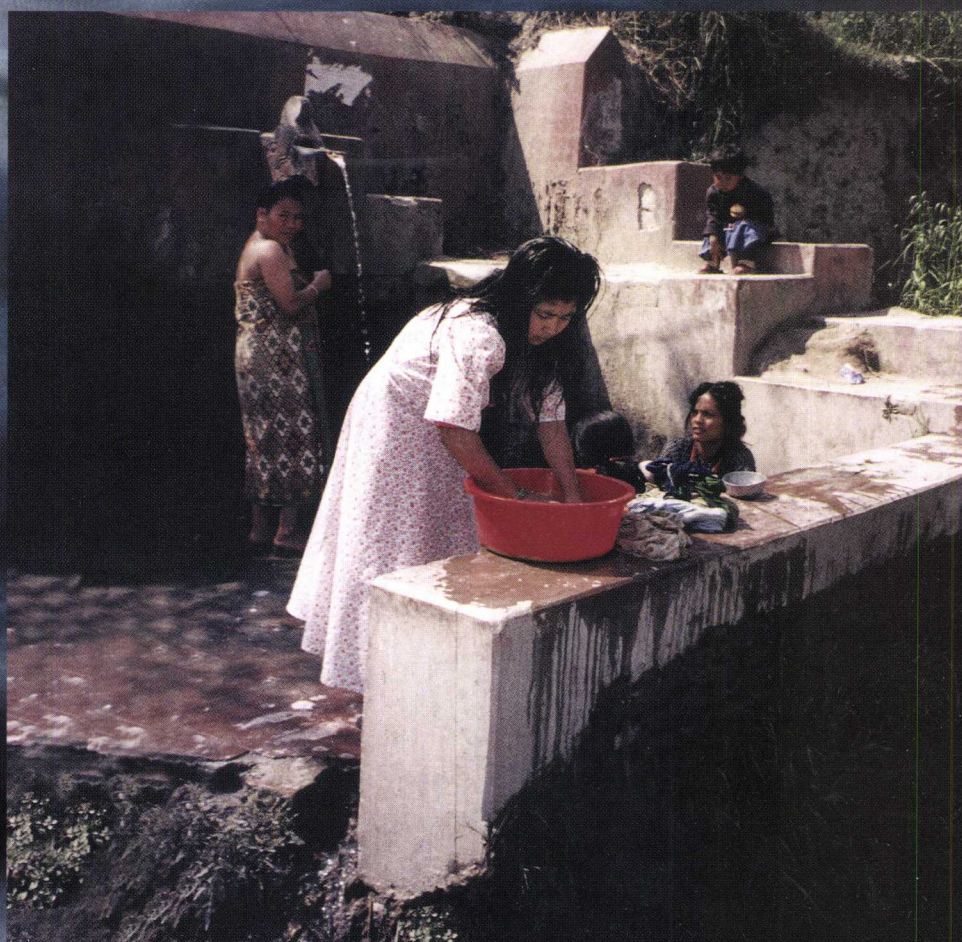




Annual Report 2002

The Cooperation between NORAD and NVE



Annual report 2002

The Cooperation between NORAD and NVE

Content

	Foreword	3
1	Background	4
2	Staff and contributors	5
3	Overview of activities and time-consumption 2002	6
4	Assignments for NORAD	7
5	Assignments for Ministry of Foreign Affairs	10
6	Institutional cooperation	11
7	Comments on NVE's cooperation with NORAD and partner institutions	23
8	Planned activities 2003	24
9	Appendices	26

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Foreword

The formal cooperation between NVE and NORAD was established in the mid 1980s. After some years with a steady increase in NVE's function as adviser on water and energy related activities, the annual volume of activities now seems to have stabilised at about 11-13 man-years, including resident advisers.

Most of NVE's activities are connected to institutional contracts with a ministry or directorate in developing countries. From a modest start with an institutional contract between NVE and Electricidade de Mozambique more than 25 years ago, 11 contracts in nine countries were in force last year. In most programmes the development of the legal framework is the major component. NORAD considers institutional cooperation as important in the efforts to achieve the principal goals of Norwegian development cooperation, including poverty alleviation.



Egil Skofteland

1 Background

The current Cooperation Agreement between the Norwegian Agency for Development Cooperation (NORAD) and the Norwegian Water Resources and Energy Directorate (NVE) is dated 14 April 2000. NVE's commitments according to the agreement are to assist and advice NORAD and the Ministry of Foreign Affairs within the framework of NVE's competence in management of water and energy resources. The agreement primarily covers assignments from NORAD or Ministry of Foreign Affairs to NVE directly, but also gives the framework for institutional agreements between NVE and institutions in cooperating countries. According to the agreement, NVE shall present an annual report to NORAD in connection with the annual meeting to be held between the two parties.

2 Staff and contributors

In NVE, the International Section coordinates the work under the Cooperation Agreement. By December 2002, the staff included five full time professionals and one administrative officer.

By December 2002 the staff also included four full time resident advisers, working permanently in cooperating institutions as part of institutional contracts. The four advisers were posted at the Ministry of Energy and Water Affairs in Angola, the Ministry of Mines and Energy in Namibia, the Electricity Regulatory Authority of Uganda, and the National Energy Directorate of Mozambique.

The services of NVE cover a wide range of activities, and the International Section draws on the full staff of NVE in order to carry out the assignments. 29 professionals from other NVE departments have been engaged in 2002, producing about 40% of the man-hours recorded on these assignments at the headquarters. In addition, several private consultants and professionals from other directorates, research institutions have been sub-contracted in certain specific areas, i.a. to compensate for lack of NVE capacity in certain periods.



Egil Skofteland
Head of Section, Hydrologist.
Coordinator Angola, Vietnam



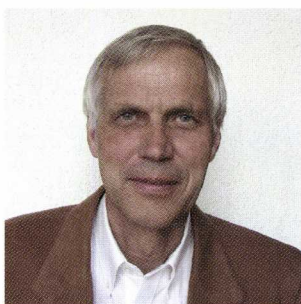
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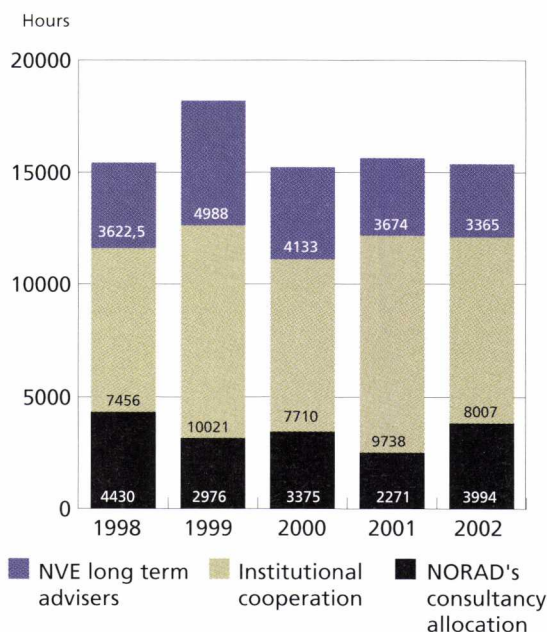


Terje Gimming
Civil Engineer,
Coordinator Bhutan,
Nepal (Melamchi)

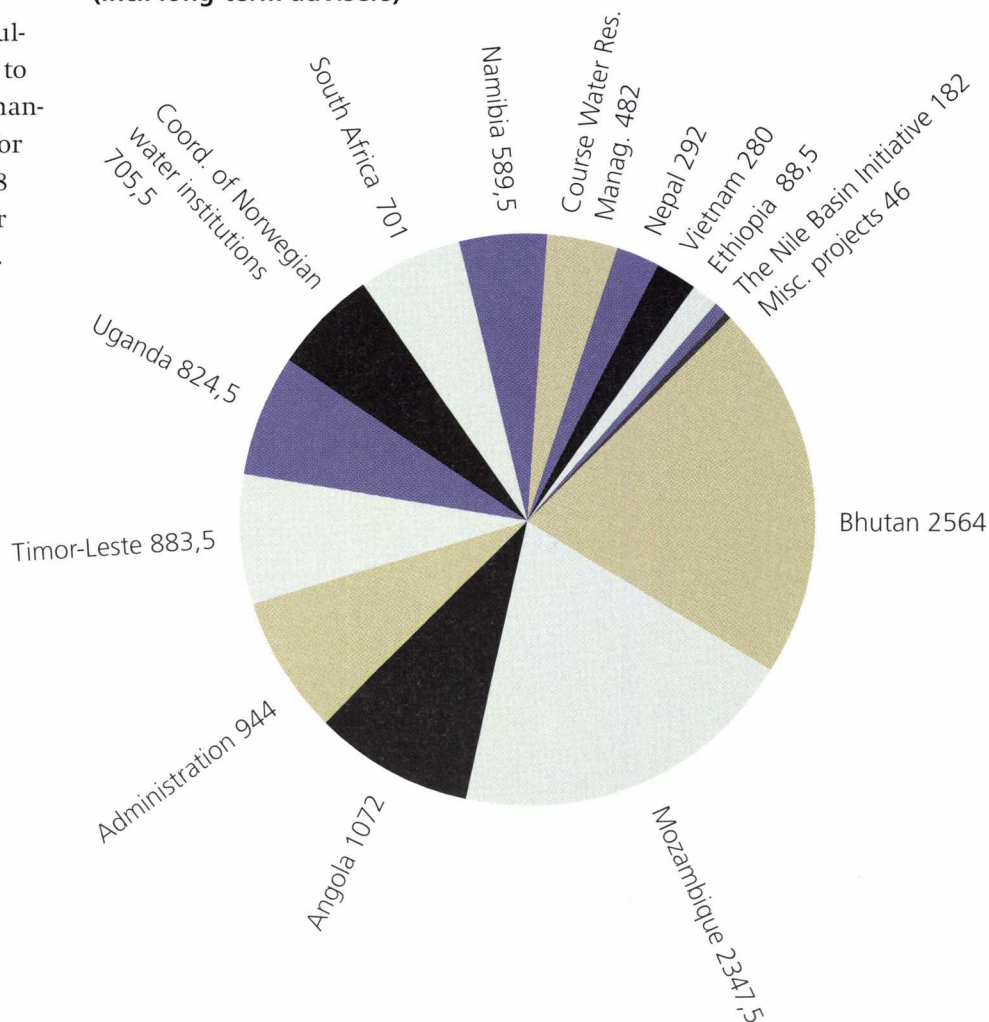
3 Overview of activities and time consumption 2002

The volume of activities in 2002 was recorded at 11 man-years (one man-year = 1400 hours net). It can be noted that the annual level of activities seems to have stabilised at about 11-13 man-years, and this is a level regarded by NVE to be appropriate as compared to the Directorate's domestic duties. The development of NVE's international cooperation over the last five years is illustrated on the figure.

The increase in NORAD's consultancy allocation is mainly due to activities in Timor-Leste (883 man-hours), and also assignments for Ministry of Foreign Affairs (628 man-hours) registered together with NORAD-funded activities.



The main distribution on countries and activities of recorded man-hour (incl. long-term advisers)



4 Assignments for NORAD

A considerable number of assignments have been carried out, either on direct request from NORAD, or on request from institutions via NORAD. Only the more time consuming assignments are reported in the following.

4.1 Course on Water Resources Management for Development

Following discussions between NORAD and NVE on how Norwegian water related institutions could improve the relevance and quality of their assistance to developing countries, a second course on Water Resources and Management was organised in March/April 2002. The course was arranged in cooperation between NVE, Norwegian Pollution Control Authority (SFT) and Directorate for Nature Management (DN), with NVE as the lead institution.

4.2 Seminar on Regulation of Competitive Electricity Markets

A seminar on Regulation of Competitive Markets was arranged in Oslo 18-22 November 2002 after initiative from the National Electricity Regulator (NER) in South Africa. NER covered a major part of the seminar costs. Other participants were also invited and it was in total



Evaluation of potential hydropower projects in Timor-Leste

12 participants from 5 countries representing 6 institutions having institutional agreements with NVE.

The seminar was organised in cooperation between Nord Pool Consulting; ECON, Centre for Economic Analysis, and NVE.

A follow up of the seminar is planned in June 2003 where the focus will be of regulation on network services and restructuring. This is presented on the web page: www.elri.org.

4.3 Support to Timor-Leste within the energy sector

Timor-Leste was for several hundreds years a colony under Portugal, and from 1977 to 1999 the country was ruled by Indonesia. During the tragic unrest in 1999, most of the houses, the infrastructure like power stations, transmission and distribution lines, all archives etc, were destroyed. From 1999 up to May 2002 the country was assisted by United Nation Transitional Administration in East-Timor, UNTAET. The 20 May



River loaded with sediments, Timor-Leste

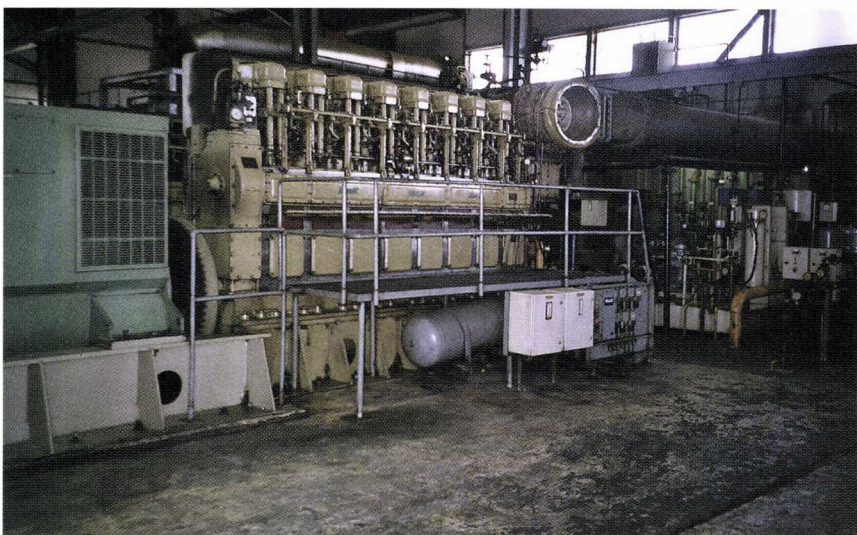
2002 the country became independent under the name Timor-Leste.

Based upon a request from Timor-Leste in December 2001 for support within the energy sector, NVE participated in a NORAD headed delegation to the country 28 February – 6 March 2002, and a follow-up mission took place 21 October – 2 November 2002.

The electricity supply system in Timor-Leste is in a very bad condition, with lack of capacity, several interruptions and break downs of the net. Diesel power plants supply all electricity in the country, and most of the machines are old and worn out.



Norwegian financed diesel generators in Dili, Timor-Leste



Old diesel powerstation in Dili

Achievements

Reports from both missions to Timor-Leste in 2002 have been submitted NORAD. The last report "Preparation for Institutional Cooperation between the Ministry of Transport, Communication and Public Works, Timor-Leste and Norwegian Water Resources and Energy Directorate (NVE), Norway" was completed in January 2003.

It was recommended that NVE should enter into an institutional cooperation with the partner organisation in Timor-Leste to develop its organisational structure and key functions, and assist in human resources development and capacity building. It was further recommended to carry out feasibility studies for two hydropower schemes and a mini hydropower scheme, and to assist in some improvements at the diesel power station for Dili town.

Norway granted funds to buy small diesel generators with total capacity of 6 MW to supply the capital city Dili, and NVE assisted during this process. Before the end of 2002, these machines were operating.

NVE participated in site visits both by car and helicopter to map the hydropower potential in the country, and to survey the condition of the transmission and distribution lines. Several site visits were made to the main diesel power station for Dili town.

4.4 Assistance on planning of Upper Tama Koshi Hydroelectric Project in Nepal.

NVE was by NORAD requested to carry out an evaluation of the terms of references for a Feasibility Study of Upper Tama Koshi Hydroelectric Project in Nepal.

The Project is a peaking run-of-river scheme located in Tama Koshi Basin in the lower range of the High Himalayas with proposed installed capacity of 250 MW generating about 1570 GWh per year, of which 1247 GWh is firm energy.

Achievements

NVE completed the evaluation by September 2002.

4.5 Delegation from Nepal

NVE was from the Royal Norwegian Embassy in Nepal requested to host a High Level Mission from Nepal within the Energy Sector in September 2002. The Mission was headed by the Secretary, Ministry of Water Resources, MOWR. Other participants came from the same Ministry, from Department of Electricity Development (DOED) and from Nepal Electricity Authority, NEA.

Achievements

NVE arranged a 5-day programme for the delegation, including meetings with the Ministry of Energy and Petroleum, NORAD, NVE, and the Norwegian consultants within energy. A full day meeting concerning Upper Tama Koshi and a full day site visit to hydropower schemes were also arranged.

4.6 Hydropower projects in Ethiopia

Towards the end of the year NORAD requested NVE to assist in their appraisal of a request from the government of Ethiopia for support to feasibility studies for Baro and Karadobi hydropower projects. These projects are intended to be part of the Nile Basin Initiative. A desk study was carried out based on reports and other available documentation. The work is expected to continue following internal review of the desk study by NORAD.

Achievements

Completion of desk study with various assessments and comments, including proposed Terms of Reference for feasibility studies.

5 Assignments for Ministry of Foreign Affairs

5.1 The World Summit on Sustainable Development in Johannesburg

NVE contributed in developing conference documents and co-ordinated the work of the stakeholders in the presentation at the Norwegian exhibition "Bridges for development" at Ubuntu Village.

More than 65,000 people visited Johannesburg and Norway decided on a joint presentation of the Norwegian water-sector institutions having competence and experience in Integrated Water Resources Management. Prepared for the exhibition were brochures, posters, internet site, and flyers/postcards. Personnel from Norwegian Water Resources and Energy Directorate, Geological Survey of Norway, and Norwegian Institute for Water Research manned the stand, answering questions and giving short presentations. The Norwegian Trade Council was in charge of the preparation and presentation at the exhibition in Johannesburg.

5.2 Presentation of the Norwegian water-sector competence

Ministry of Foreign Affairs initiated in 2000 a discussion on how to improve the cooperation between the water sector institutions



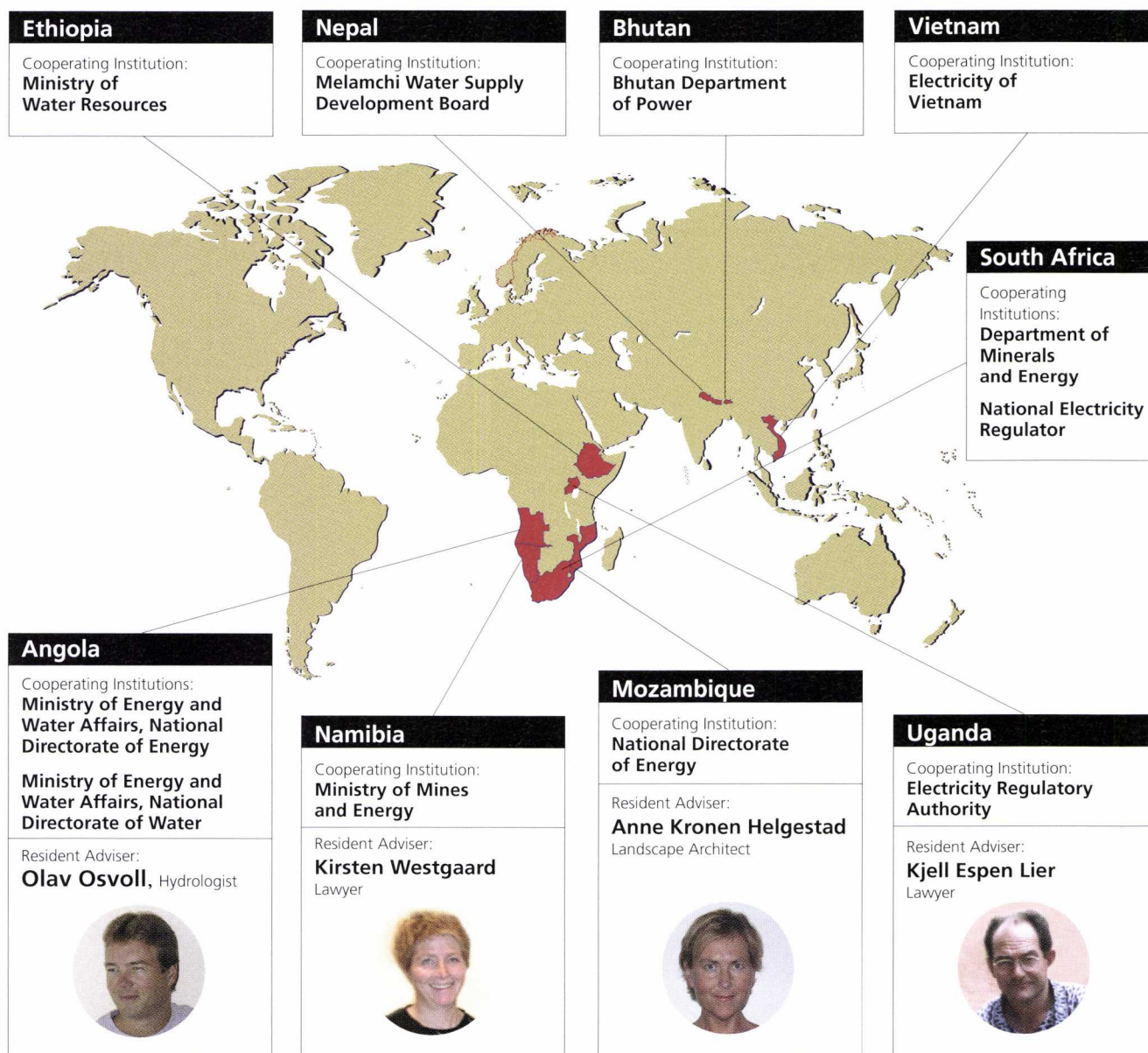
Geir Taugbol, NVE and Bjørn Fåfeng at the Norwegian stand in Johannesburg. Photo: Per Kristiansen

and their professionals in their assistance to developing countries. Prospects of formalizing a joint effort on this were discussed further in 2002 between NVE, SFT, DN, NIVA and NGU. A workshop was arranged where participants from NGOs, education- and research institutions, and private companies were invited to discuss goals and possibilities. A report was prepared in December 2002.



Ubuntu Village. Photo: Per Kristiansen

6 Institutional cooperation



The following institutional contracts have been in force:

Country	Cooperating institution	Period ¹⁾	Total project budget (NOK 1000)		Budget for NVE inst. cooperation (NOK 1000)
Angola	Ministry of Energy and Water Affairs, National Directorate of Energy	2000-2002	52,000		4,500
Angola	Ministry of Energy and Water Affairs, National Directorate of Water	2001-2003	15,000		7,500
Bhutan	Department of Power	2001-2003	20,000		6,500
Ethiopia	Ministry of Water Resources	1996-1999	6,300		4,000
Mozambique	National Directorate of Energy	1998-2005	36,700		13,700
Namibia	Ministry of Mines and Energy	1999-2002	13,600		5,500
Nepal	Melamchi Water Supply Development Board	1998-2002	69,500		2,500
South Africa	Department of Minerals and Energy	2002-2004	2,700		0,500
South Africa	National Electricity Regulator	2001-2003	9,371		0,700
Uganda	Electricity Regulatory Authority	2001-2003	14,500		5,350
Vietnam	Electricity of Vietnam	1999-2003	32,000		5,000
TOTAL			271,671		55,750

The table shows that on average 20 % of the total project funds is spent on activities directly linked to the institutional cooperation with NVE (NVE fees and reimbursables, training, visits/study tours by cooperating institution, etc). The remaining 80 % of the funds is mainly spent on assignments of private consultancy companies, either on direct contract with the cooperating institution, or with NVE. In Angola a considerable amount is also spent on spareparts to electricity supply companies, hydrometric equipment, and vehicles.

¹⁾The original period of cooperation is often extended, and all listed contracts will continue into 2003.

6.1 Angola

6.1.1 Ministry of Energy and Water Affairs (MINEA), National Directorate of Energy (DNE)

The Institutional Cooperation between MINEA by DNE, and NVE is based on a Contract covering the period 2000-2002.

The Programme includes seven projects:

- Follow-up of the NESMA (National Energy Sector Management) process, including follow-up of the MINEA Management Information System.
- Institutional strengthening of Luanda Electricity Utility (EDEL), phase 2, implementation of a Strategy Plan (phase 1).
- Provision of spare parts to Angolan power utilities.
- English language courses for key personnel in the energy sector.
- Programme administration and coordination, NVE.
- Logistics in Angola.

The cooperation includes short-term missions to Angola by NVE personnel and consultants contracted by NVE, and assistance in monitoring consultants and suppliers. Activities included assistance in work on a strategy plan for institutional strengthening of MINEA/DNE, based on the new Statutes for MINEA. The Strategy Plan includes a recruiting and training plan for MINEA personnel as well as the creation of a Regulating Agency.



Rural electrification in Angola

Achievements

- Two department directors at MINEA/DNE have completed a six weeks training program at the Directorate of Energy and the Regulating Agency in Portugal. The two government institutions were contributing their time free of charge. NVE defined the training programme in cooperation with MINEA and the Portuguese institutions.
- The National Director of Energy visited Norway in December to participate in a workshop on market activity in the electricity sector.
- The implementation of the strategy plan for strengthening of EDEL is proceeding according to plans.
- The second year tender process in the spare parts project was completed and suppliers have been contracted. The third and last tender round will be completed early in 2003.
- Regular classes in the English language project were completed in December with 15 persons. Five of those with best grades will be selected for advanced training in South Africa in 2003.

6.1.2 Ministry of Energy and Water Affairs (MINEA), National Directorate of Water (DNA)

The Institutional Cooperation between MINEA by DNA and NVE is based on a Contract covering the period 2001-2003.

The Water Resources Programme includes the following main components:

- Capacity building and training
- Hydrometric Network
- Water Resources management and planning
- Legal framework and international cooperation.

The cooperation includes a resident hydrological adviser in Luanda and short-term missions to Angola by NVE personnel or by consultants contracted by NVE or DNA.

Achievements

The programme started in April 2002 and the first component was an English language training programme for 20 people of the DNA. They received 168 Hours of English training in Luanda from May to November taking classes three times a week.

The second phase of this training was an English training course in South Africa at the University of South Africa in Pretoria (UNISA). There they received 90 hours of general and scientific English during 6 weeks from November to December.

The resident hydrological adviser commenced his work in Luanda in August and the main tasks have been:

- Procurement of hydrological equipment
- Procurement of vehicles
- Procurement of office equipment
- Evaluating the National hydrological database
- Quality control of the production of Hydrological Yearbooks 1969 – 1973
- Planning of training in Hydrology
- Planning of the rehabilitation of five hydrometric stations (Pilot programme)



DNA-NVE field team in Angola

6.2 Bhutan

6.2.1 Department of Energy (DoE)

2002 was the second year of a three-year cooperation programme which includes assistance in the contracting and follow-up of a Consultant to prepare an integrated Water Resources Management Plan and an updated Power System Master Plan – and institutional activities. Within institutional development the main activities during 2002 have included:

- Formulation of a national water policy
- Preparation of a Water Resources Act
- New institutional structure for the water resources and energy sectors
- International power trade and electricity export tariffs
- Regulations to the new electricity act

Work within the water resources sector has been carried out under the leadership of Bhutan Water Partnership (BWP), where DoE is one of the major stakeholders. 50% of this work has been funded by DANIDA. The work has been carried out through workshops, and the cooperation between the Bhutanese side and NVE and the Consultant engaged by DANIDA has functioned well. In March a final version of the Water Policy was approved by BWP and this document served as basis for the preparation of the two first drafts of the Water Resources Act. Subsequent to the last workshop on the act in June it was decided that DANIDA would take over the main responsibility for the Water Resources Act.

In parallel to the work on the Water Policy and the Water



Meetings were held with the regional administrations regarding new institutional structure for the water resources sector.



Primula Denticulata. Protection of the environment means a lot in Bhutan and the philosophy is "Gross National Happiness rather than Gross National Product".

Resources Act, work has been going on regarding a new institutional structure for the water resources sector, resulting i.a. in a recommendation by NVE for a new Ministry for Water Resources and Energy. This matter has been brought forward to the Government for decision. Pending this decision, further work on the Water Resources Act has been put on hold. Subsequent to this development, further work on institutional structure has concentrated on the structure of the new Department of Energy. A desk study on this was submitted near the end of the year, which will serve as basis for discussions between DoE and NVE.

Following discussions in Bhutan, a first and second draft of regulations to the Electricity Act have been drafted by a NVE team. The second draft will be reviewed in a workshop to be held in January 2003.



Happy Bhutanese boys on the way home from school

Norconsult International AS was subcontracted by NVE to carry out workshops on international power trade, power purchase agreements and export tariffs. The first of two workshops was held in August and the second one will be held in January 2003.

Throughout the consultancy work on the WRMP and PSMP, NVE has commented on working reports and assisted in the handling of contractual matters.

Achievements

- National Water Policy approved by BWP
- Draft of a Water Resources Act
- Recommendations for a new institutional structure for the water resources sector
- Desk study report on new structure for DoE
- Draft of regulations to the Electricity Act.

6.3 Ethiopia

6.3.1 Ministry of Water Resources (MoWR)

The Institutional Contract between MoWR and NVE was signed 22 May 1996, with an Addendum of 24 February 1997. Another Addendum prolonged the Agreement to the end of 2002.

The objective of the project is to improve handling and analysis in the hydrology sector including the quality and efficiency of data collection.

The project has for periods the last years been at a standstill but from April 2001 the project was restarted. Since then, there has been an active period to catch up with the delays.



Local tribe. Omorate, Southwest Ethiopia

Achievements

A contract regarding NAM MIKE 11, including training course and software upgrading at the Hydrological Studies Department was worked out with the Danish Hydraulic Institute (DHI) and signed March 2002. The work was carried out in April 2002, and the final report from DHI was received in May 2002. NAM MIKE 11 is a hydrological model, including flood-forecasting.

2 October 2002, a contract was signed with Centre for Ecology and Hydrology in England to install and carry out training on the HYDATA model, which is a hydrological data handling and storage model. The installation and training were carried out in the period 7-18 October, and the report was completed in October 2002. Hydrological data are now entered into the new model.

The project will be terminated with a winding up workshop and meeting probably April 2003

6.4 Mozambique

6.4.1 National Energy Directorate (DNE)

A contract on institutional cooperation between the National Energy Directorate and NVE was signed in March 1998. The project period is extended by Phase 2 of the cooperation up to the end of June 2005 in the Addendum signed 14 and 17 June 2002. NVE will assist DNE in strengthening its administrative routines, effectiveness, and skills connected to regulation of the Mozambican energy sector.

Areas of cooperation are to finalise and maintain an appropriate legal and regulatory framework, develop bidding procedures and model licenses and concession agreements, and increase the capacity within energy planning. A continued assistance with the development of the Rural Electrification Action Plan, more training and education of the DNE staff, increase the work with the Energy Audit/Efficiency, and to improve the procurement procedures are also topics for the cooperation.

Achievements

Short-term advisers carried out much work for the remaining period of the Phase 1 of the cooperation between DNE and NVE. A long-term adviser was employed from March 2002 to complete the remaining period of Phase 1, and continue with Phase 2. Phase 2 will continue to 2005.

A visit to Norway by the President and the Minister of Minerals and Energy in Mozambique was prepared and successfully carried out in April 2002. The Norwegian Ambassador in Maputo and the Secretary of the Embassy responsible for energy participated also, together with several Mozambican energy specialists.

The work in the Regulation Work Group has progressed satisfactorily, but the coordination with the Danish ESPS and the World Bank ERAP created some confusion a period. All the work on regulations and standards should in the future be coordinated by the Regulation Work Group.

A workshop on Tariffs in the Electricity Sector was successfully arranged in October with 20 participants.

The first course in Rural Electrification and Environmental Management (Training of Trainers) was arranged in Maputo in July/August.

6.5 Namibia

6.5.1 Ministry of Mines and Energy (MME)

The cooperation between MME and NVE has been going on since 1994. NVE has had a resident energy advisor in Namibia since 1997.

The cooperation has emphasised assistance to the Electricity Control Board (ECB) after it was established in July 2000.

The present contract includes approximately 10 activities covering a wide variety of topics. The last year much focus has been given to the restructuring of the electricity sector in Namibia and implementation of new tariffs for distribution of electricity.

Achievements

As a result of the restructuring process, generation, transmission, and distribution are now regarded as different functions.

The ECB has established a licensing regime and licenses have been issued to the above-mentioned players.

Economic and Technical Regulations to the Electricity Act have been developed.

Emphasis has also been given to promotion of bio-energy through development of more efficient stoves and a comprehensive project has targeted this topic.

Preparation for implementation of new cost based tariffs for distribution in accordance with the regulatory regime has been a major task in 2002. ECB has contracted PriceWaterhouseCoopers to make a manual with procedures for how to ring fence the electricity business from the municipal activity. Procedures and schedules for how electricity utilities shall report information to ECB is also prepared for. This exercise is executed in close cooperation with the utilities in Namibia.

A media training seminar for the top management in MME was arranged in Windhoek in February 2002. The seminar focused on development of competence in communication through press and television. The seminar was arranged by the Information Director of NVE.

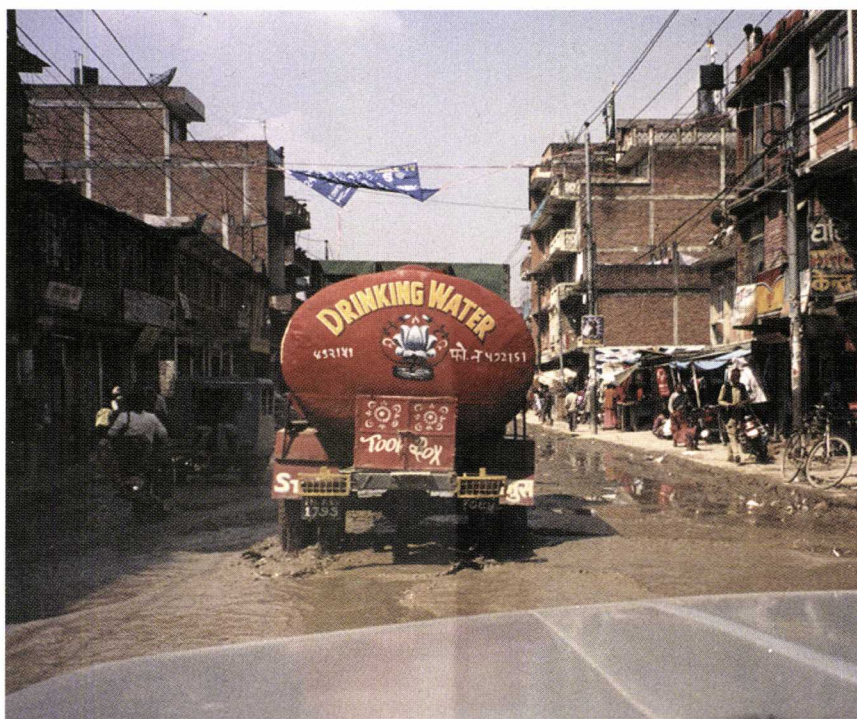
6.6 Nepal

6.6.1 Melamchi Water Supply Development Board (MWSDB)

NVE's contract with MWSDB dates back to 1998 and the work has included contracting of the Consultant and advisory services regarding a water diversion tunnel from Melamchi valley for a new water supply to Kathmandu. Near the end of 2002, NVE prepared assessments on different modes and related cost of engagement of consultants for carrying out the working drawings and the construction supervision for the diversion tunnel and accompanying works.

Achievement:

Submittal of report with assessments and cost estimates.



6.7 South Africa

6.7.1 National Electricity Regulator (NER).

NVE has had a cooperation agreement with the National Electricity Regulator (NER) in South Africa since February 1999. The cooperation has focused on development of a regulatory framework to accommodate a restructured Electricity Supply Industry. NER and NVE entered into a second phase of the cooperation in June 2001. The objective of the cooperation is to provide technical assistance to NER and transfer of skills between the two organizations.

Achievements

A short seminar on energy and regulatory issues was arranged in September 2002 in connection with the annual meeting between NER and NVE. NER took the initiative to arrange training in regulation of competitive markets and a seminar in that respect was arranged for in Oslo in November 2002. Other regulators in Africa were also invited to attend the seminar and professionals from 6 different countries participated. A project for information capacity building is started. The purpose of the project is to streamline information from electricity utilities to NER. The information collected will be an important regulatory tool for NER.

6.7.2 Department of Minerals and Energy (DME).

In February 2002, NVE entered into a contract with Department of Minerals and Energy (DME) in South Africa. The contact focuses on capacity building of DME to meet the challenges of the foreseen restructuring process in South Africa.

Achievements

A media training seminar for the management in DME was arranged in Pretoria in November 2002. The seminar focused on development of competence in communication through press and television. The seminar was arranged by the Information Director of NVE. Personnel from DME have participated in the seminar on regulation of competitive markets arranged in November 2002, and a short seminar on energy and regulatory issues was arranged in September 2002 in connection with the annual meeting between DME and NVE.

6.8 Uganda

6.8.1 Electricity Regulatory Authority (ERA)

NVE and ERA initiated in 2001 an institutional cooperation to establish ERA as an efficient and credible Regulator. The cooperation shall last for at least 3 years, and will involve substantial assistance from NVE and subcontracted consultants. The cooperation will include – among other topics – assessment of regulatory framework, training of ERA personnel, and development of legal instruments.



Owen Falls, Uganda

Achievements

- A licence fee structure and level, and reporting schedules for licensees are developed and approved.
- An organization chart for ERA and a Strategic Plan are developed and approved. Most vacant posts according to the plans are filled.
- An extensive training programme for ERA staff is prepared, and a large number of training activities have taken place, both in Uganda, Norway and other countries.
- An annual tariff review is undertaken in conjunction with UEGC's, UETC's and UEDC's operations. The new tariffs for these operators are approved and implemented.
- Primary Grid Code, Quality of Service Code, Electricity Safety Code, Tariff Code and Installation Permit Regulations have been drafted, and await approval. A Code of Ethics for ERA staff is prepared.

6.9 Vietnam

6.9.1 Electricity of Vietnam (EVN)

Norway and Sweden have since April 1999 provided financial support to Vietnam for the development of a National Hydropower Plan (NHP) Study. Stage 1 comprising the five priority river basins with respect to hydropower was completed in December 2001. These rivers are accounting for about 70-75% of the estimated total exploitable hydropower in Vietnam. The Norwegian and Swedish Grants were NOK 17 mill. and SEK 19 mill., respectively.

EVN is the Client and is responsible for the implementation of the Study. The Norwegian Grant has financed Technical Assistance as institutional support to EVN through a contract between EVN and NVE, including the position of a NVE long-term adviser in EVN. A Swedish/Norwegian Consortium has conducted the consulting services.

Achievements

With the assistance of NVE, a comprehensive Project Document for a Stage 2 of the Study was prepared in 2002. The main objective of Stage 2 is to complete the Study to cover the whole country by examining the remaining 4 main river basins having attractive hydropower potential. Cross-border issues will be given particular attention. In September 2002, Vietnam officially requested Norway and Sweden to fund NHP Stage 2 with approximately NOK 30 mill. over a period of 2 years. The EVN/NVE institutional cooperation is proposed to continue, and the consulting services are proposed to be provided by the same consortium as in Stage 1. It is expected that the final decision to fund the NHP Stage 2 will be taken in early 2003.



Girl from an ethnic minority group

7 Comments on NVE's cooperation with NORAD and partner institutions

7.1 Cooperation with NORAD and Ministry of Foreign Affairs

The cooperation with NORAD and Section for the Environment and Sustainable Development in the Ministry of Foreign Affairs have been carried out without any major difficulties. The general assistance to NORAD in 2001 was recorded at about 1000 hours spent on reporting accounts to NORAD, preparation of new projects, visits of delegations, and part of the administration of the International Section.

Also the cooperation with the Norwegian embassies has in general been smooth, though the varying degree of detailed involvement by embassy personnel may cause problems, and delays. In Angola, all procurements of goods and services shall be approved by the embassy before entering into force, with no lower limit defined. This procedure increases the workload both for the embassy and for project personnel.

7.2 Cooperation with partner institutions

Substantial results have been achieved in the cooperation with partner institutions in developing countries, but also some problems have occurred. The most common problem is that planned activities have been delayed for different reasons. Some times our partners have problems to fulfil the obligations of the contracts because of the working condition and available human resources. The reason for this may be connected to external factors beyond any of the parties control.

7.3 Cooperation with other institutions

On a case by case basis, NVE has frequent contacts with other Norwegian directorates, research institutions, and universities. The second course in "Water Resources Management for Development" was completed in April. The cooperation with the Norwegian water institutions; State Pollution Control Authority (SFT), Directorate for Nature Management (DN), Norwegian Institute for Water Research (NIVA), Geological Survey of Norway (NGU) and NVE, contributed to the development of a joint presentation of the Norwegian professionals at the World Summit Sustainable Development (WSSD). An initiative was taken to develop this cooperation for further international cooperation. NVE is a member of the board for the International Centre for Hydropower and is actively contributing to ICH's initiatives towards developing countries.

8 Planned activities 2003

The expected time consumption in 2003 is estimated to 13 man-years (one man-year=1400 net hours), including the hours recorded for long-term resident advisers. This is based on existing commitments laid down in the running institutional contracts, and new activities as discussed with NORAD. All 11 contracts with institutions in 9 countries in force in 2002 will continue into 2003. Furthermore, the following new projects/activities are foreseen in 2003:

Ethiopia: NVE assisted NORAD in 2002 in their appraisal of a request from Ethiopia for support to feasibility studies for Baro and Karadobi hydropower projects. A follow-up of this assignment may come in 2003.

Namibia: On request by NORAD, NVE will contract a Consultant to assess the ongoing extensive programme for rural electrification in Namibia. The programme started in 1990.

Nepal: On request by the Norwegian Embassy in Nepal, NVE will assist Nepal Electricity Authority, NEA, in the bidding and evaluation process for a feasibility study of the Upper Tama Koshi Hydro-electric Project.

Nepal: NVE will assist Directorate for Nature in its cooperation with Ministry of Population and Environment in Nepal.

Tanzania: NVE is involved in the organisation of the conference "Hydro Africa 2003" in Arusha 17-19 November, arranged by the International Centre for Hydropower and Tanzania Electric Supply Company Limited.

Tanzania: A seminar organised by NVE on preparation of Letter of Invitation, Terms of Reference, and the conduct of contract negotiations, is planned for participants from Tanzania and Uganda.

Timor-Leste: A contract between NVE and Ministry of Transport, Communication and Public Works in Timor-Leste on institutional strengthening of the power sector is expected to be signed early 2003.

Uganda: NVE will assist Directorate of Water Development in Uganda in the preparation of regulations for processing and issuing of permits for the construction of major hydraulic works.

Zanzibar: On request by NORAD, NVE will make an assessment of the proposed phase IV of the Zanzibar Rural Electrification Project.

SADC: An association of electric regulators, RERA, in the SADC region was established in October 2002 in Windhoek. An institutional cooperation between NVE and RERA starting in 2003 is being planned.

SAPP: NORAD is considering supporting Southern African Power Pool (SAPP) through the financing of cooperation between SAPP and Nord Pool AS. NVE has accepted to assist in the preparatory work to establish this support.

Nile Basin: NVE is requested to support NORAD on activities connected to the Nile Basin Initiative, in particular the Regional Power Trade Project.

NVE is planning to organise a seminar on Regulation of Network Services and Restructuring in Oslo 16-22 June.

Kyoto: NVE and Ministry of Petroleum and Energy are planning to arrange a multi-media session on water and governance during the 3d World Water Forum in Kyoto in March 2003.

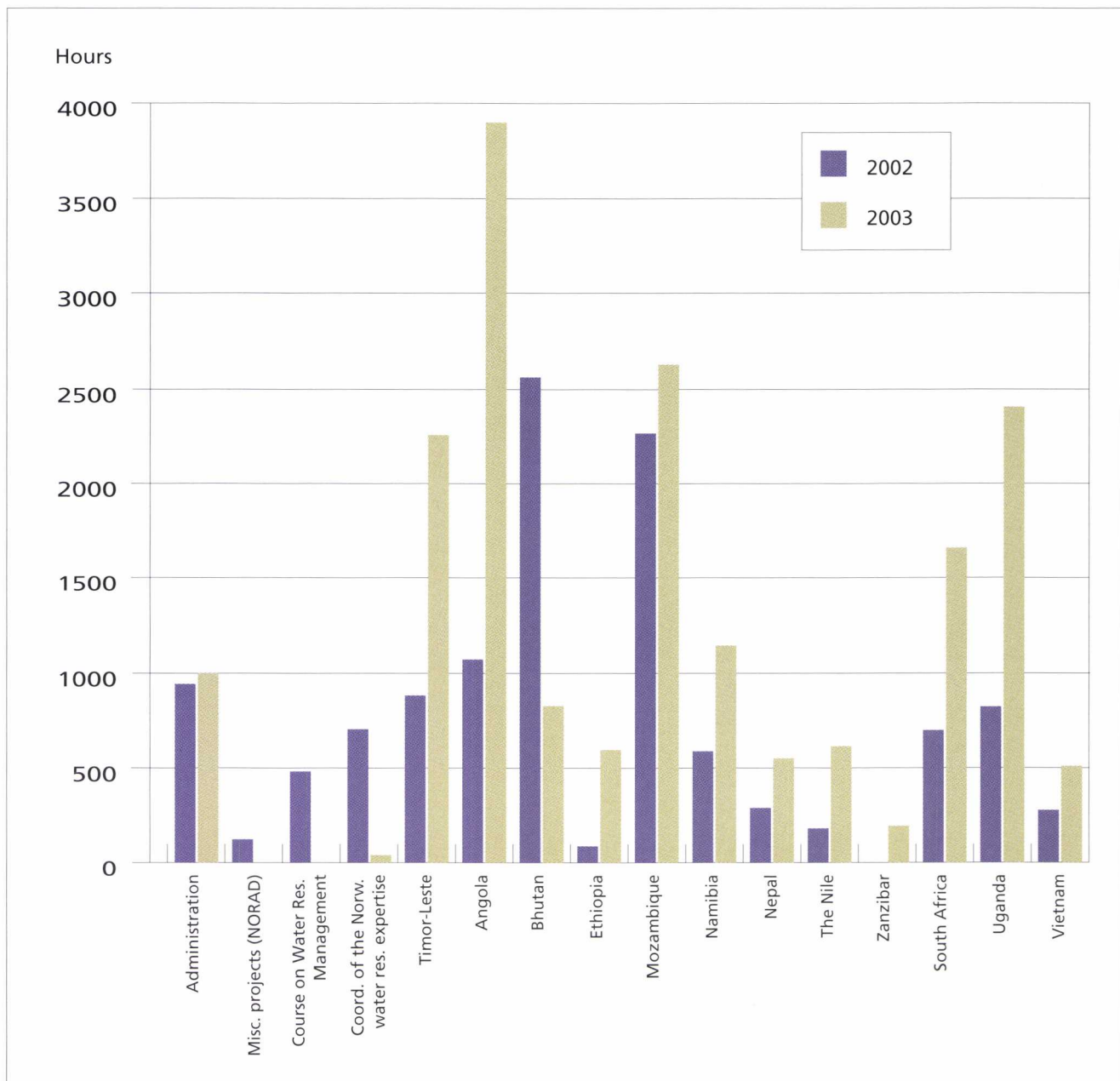
Some of the above activities have been added after the planning meeting with NORAD 11 February, and are not included in Table 9.4 Appendix B.

The distribution of planned activities between countries compared to 2002 is illustrated on the next page. An increase level of activities is expected to take place in Timor-Leste with the signing of an institutional contract early 2003, and on the water sector in Angola where a full-time resident adviser is working. Furthermore, various

new activities are planned in Namibia, Nepal, Zanzibar, South Africa, and Uganda.

In Bhutan, preparations for an extension of the present institutional cooperation have started. In Vietnam, Stage 2 of the Natio-

nal Hydropower Plan is expected to be launched. Also the Nile Basin initiative is expected to gain momentum in 2003.



9 Appendices

9.2 Appendix A, Table A-1: Total Invoiced, NORAD/Ministry of Foreign Affairs assignments

Based on invoiced expenses 1-4 quarter 2002, all in NOK

Proj.no	Activity	NVE hours	Fee (charged)	NVE exp.	Consultants	TOTAL
32001	General assistance	944,00	637 200,00	18 088,75		655 288,75
32001	Vietnam, NHP	76,00	51 300,00			51 300,00
32009	Nile Basin initiative	182,00	122 850,00	85,00		122 935,00
32017	Course Water Resources Management	482,00	325 350,00	51 543,70		376 893,70
32020	Coordination of Norwegian water inst.	77,50	52 312,50	33 036,50		85 349,00
32028	Mozambique, Namacurra	173,00	116 775,00			116 775,00
32029	Uganda, Bujagali	48,00	32 400,00	57 376,00		89 776,00
32030	Vietnam, MARD	106,00	71 550,00		77 528,67	149 078,67
32031	Timor-Leste	883,50	596 362,50	318 677,06		915 039,56
32031	State President visit	79,00	53 325,00	18 619,40		71 944,40
32034	Presentation of Norwegian Water inst.	628,00	423 900,00	105 346,62	381 793,77	911 040,39
32035	Nepal, Upper Tama Koshi	226,00	152 550,00	31 492,48		184 042,48
32037	Zanzibar, Rural Electrification	3,00	2 025,00			2 025,00
32038	Seminar re. Regulation	43,00				
32039	Ethiopia, Feasibility Study	41,50	28 012,50			28 012,50
32040	Namibia, Rural Electricity Supply	2,00	1 350,00			1 350,00
TOTAL		3 994,50	2 667 262,50	634 265,51	459 322,44	3 760 850,45

9.3 Appendix A, Table A-2: Total invoiced, institutional contracts

Based on invoiced expenses 1-4 quarter 2002, all in NOK.

Proj.no	Cooperation institution	NVE hours	Fee (charged	NVE-adviser	NVE exp.	Consultants	TOTAL
32501	Angola. Ministry of Energy and Water Affairs, Energy sector	619	417 825,00		346 528,36	335 319,70	1 099 673,06
32536	Angola. Ministry of Energy and Water Affairs, Water Sector	453	305 775,00	424 822,86	968 051,71	13 500,00	1 712 149,57
32532	Bhutan. Department of Power	2564	1 730 700,00		1 155 222,10	474 137,08	3 360 059,18
32503	Ethiopia. Ministry of Water Resources	47	31 725,00		9 506,75	350 646,86	391 878,61
32513	Mozambique. National Directorate of Energy	2095,5	1 414 462,50	267 004,63	668 571,29		2 350 038,42
32506	Namibia. Ministry of Mines and Energy	587,5	396 562,50	547 776,32	427 557,95	752 056,00	2 123 952,77
32517	Nepal. Melamchi Water Supply Development Board.	66	44 550,00		44 783,20		89 333,20
32519	South-Africa. National Electricity Regulator	424	286 200,00		46 938,42	234 559,00	567 697,42
32534	South-Africa. Department of Mineral and Energy	260	175 500,00		52 846,17	1 520,00	229 866,17
32537	South-Africa. Association of Electric Regulators (RERA) in SADC ¹⁾	17	11 475,00				11 475,00
32526	Uganda. Ministry of Natural Resources	0			23 264,50	191 833,40	215 097,90
32530	Uganda. Electricity Regulatory Authority	775,5	523 462,50	608 356,71	297 316,59	168 415,00	1 597 550,80
32533	Uganda. Electricity Regulatory Authority, West-Nile	1	675,00		19 494,00		20 169,00
32518	Vietnam. Electricity of Vietnam	98	66 150,00		22 999,96		89 149,96
TOTAL		8007,5	5 405 062,50	1 847 960,52	4 083 081,00	2 521 987,04	13 858 091,06

1) Agreement not yet signed.

9.4 Appendix B – Estimated activity volume in manhours planned for 2003

Planned Activities 2003 (including long-term advisers)

NORAD assignments	Sector	Hours
General assistance		1 000
Nile Basin Initiative	Energy	616
Coordination of the Norwegian water resources expertise	Water	40
Timor-Leste, Power Sector	Energy/Water	260
Uganda, Licensing	Energy	348
Zanzibar, Rural Electrification	Energy	195
Namibia, Rural Electrification Evaluation	Energy	74
Bhutan, Phase II	Energy	130
Ethiopia, Feasibility Study	Energy	530
Sub-total		3 193

Country Specific Assignments

Country	Cooperating institution:		
Angola	Ministry of Energy and Water Affairs, DNE	Energy	920
Angola	Ministry of Energy and Water Affairs, DNA	Water	2 980
Butan	Department of Power	Energy	700
Ethiopia	Ministry of Water Resources	Water	67
Namibia	Ministry of Mines and Energy	Energy	1 070
Mozambique	National Energy Directorate.	Energy	2 630
Nepal	Nepal Electricity Authority	Energy	552
Vietnam	Electricity of Vietnam	Energy/Water	510
Vietnam	Ministry of Agriculture and Rural Development	Water	—
South Africa	South Africa, National Electricity Regulator	Energy	830
South-Africa	Department of Minerals and Energy	Energy	360
Namibia	Association of Electric Regulators (RERA) in SADC	Energy	470
Timor-Leste	Ministry of Transport, Communication and Public Works	Energy/Water	2 000
Uganda	Electricity Regulatory Authority	Energy	2 030
Uganda	Ministry of Energy and Mineral Development	Energy	30
	Sub-total		15 149
TOTAL PLANNED TIME CONSUMPTION			18 342



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