



Annual Report 2004



Man with child in Laos



Well-conceived large hydroelectric development can contribute positively to economic development and enhanced livelihood and poverty reduction. Such infrastructure developments can give important and beneficial opportunities for reshaping the political, social and economic landscapes. We are pleased to learn that the World Bank, followed by other donors, is increasing their focus on hydropower development.

During 2004 NORPLAN has been involved in planning and design of several large hydroelectric projects including rehabilitation and optimisation of existing plants, corporation development, as well as studying the potential for development of small hydropower projects. Projects in East Timor, Bhutan, Ethiopia, Kenya and Uganda are excellent examples of recent projects that are being successfully carried out.

Planning and design of hydroelectric projects must take into consideration the social and environmental impacts and water resources management implications, including effects on local environment and resettlement issues. NORPLAN is well placed to address the social and environmental challenges associated with hydropower development, having a team of highly qualified experts in this field. We are proud to mention that NORPLAN was awarded the contract of Cumulative Impact Assessment for the Nam Theun II hydropower development in Laos last year. Laos is among our priority countries in Asia and NORPLAN opened a new project office in Vientiane in August 2004.

Globally, NORPLAN worked in 35 countries during 2004. NORPLAN's strategic regional presence includes alliances with well known international firms combined with our own staff and local partners. We maintain high standards while integrating local know how in the services provided.

In East Africa the company's regional capabilities have been strengthened by forming strategic alliances with experienced local partners in Kenya and Ethiopia. Together with our permanent offices in Uganda and Tanzania we are confident that NORPLAN will remain in the forefront of delivering innovative and sustainable solutions to our clients in East Africa. NORPLAN Uganda and NORPLAN Tanzania contributed significantly to the total turnover in 2004.

Approximately one fourth of NORPLAN's turnover in 2004 was related to projects for oil and gas infrastructure, mainly large petrochemical installations in Iran, and engineering for large concrete oil and gas production platforms in eastern Russia. These assignments are sub-contracted by large Norwegian Oil & Gas companies to Multiconsult, a partner in NORPLAN.

We continue to place even greater emphasis on the development of our staff. In order to assure the continued development of the human resource base and competence, NORPLAN-Multiconsult has embarked on a Young Professional International Training Programme. The programme includes participation by young staff member in exchange programmes between several countries. This programme has attracted internal and external interest and recognition.

Marianne Damhaug

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Managing Director

Power and Renewable Energy

Energy Efficiency is high on the agenda worldwide. With increasing energy demands, high oil prices and a focus on reducing emissions of greenhouse gases, technologies that can increase production of clean energy are a priority. Upgrading old hydropower-plants, rehabilitating turbines and overhauling generators and electrical equipment can contribute to more power being produced at reduced costs from the same amount of water. Substantial benefits can be reaped for both plant owners and the public.



Afghanistan Inspections, Sairobi



Kiambere in Kenya



Small hydropower in Uganda

NORPLAN has specialised in analysing the potential for improving plant efficiency and output, by upgrading mechanical and electrical equipment, reducing maintenance and operating cost, and by looking at the potentials for plant expansion. Increased attention is also given to development of small hydropower plants, that have limited environmental impacts. Our assessments are based on almost a century of experience from the hydropower sector and improvements are carried out in close dialogue with plant owners and operators, manufacturers, and regulatory bodies. In Kenya, NORPLAN is now involved in two different contracts that address these challenges, namely the raising of Masinga Dam and optimising production at Kiambere hydropower plant, both part of the Seven Forks cascades on Tana River.

While energy production and output can be increased, consumers will only benefit when electricity is delivered in a stable and reliable way. Many transmission and distribution systems suffer from overloading, instability and outages and may need replacement of old or obsolete equipment as well as expansion. System operations may also suffer from inadequate coordination and communication between production units and load centres.

NORPLAN provides expertise on system and network analyses and upgrading and load distribution, as well as operation of production units in order to optimise production capacity to meet the daily and seasonal variations in energy consumption. In Kenya NORPLAN carried out a study for the Kenya Power and Lighting Company KPLC, for planning of physical improvements to the network and to reduce physical and non-physical losses.

Modernised plants and distribution systems require efficient management and efficient utilities.

NORPLAN provides advice on energy sector and utility reform and management. National strategies for rural electrification, power masterplans, and hydropower masterplans are areas where NORPLAN has gained substantial experience. NORPLAN has also assisted

utilities in adapting administrative structures, financial management and system operations to the needs of today. This also includes adapting new tariff structures, improving billing and cost recovery, as well as capacity building for utility staff. In Bhutan NORPLAN has provided advice for the establishment of Druk Hydropower Corporation that will manage the existing Chhukha Hydropower Plant. The contract includes assistance for establishing power sales agreements, improving technical operations, training of personnel, and advice on financial management.

Although energy efficiency may contribute to satisfying some of the energy needs, the demand for new production capacity is ever present.

NORPLAN provides the full range of services throughout the project cycle and value chain for identification, study, design, tendering and construction supervision for small and large hydropower plants.

A small country such as East Timor is studying the possibilities of securing and expanding its energy supply and substituting some of its diesel fired power production with cleaner, cheaper and more reliable hydropower. To this end, NORPLAN is participating in a consortium that is carrying out feasibility studies of potential sites for new hydropower production. This includes both small hydro and mini-hydro solutions. In addition NORPLAN is carrying out a study on the network system, thus combining the experiences from both subjects to provide East Timor with modern production and distribution systems. This will help this new nation to develop its economic potential, while reducing its dependency on expensive and unreliable energy sources and reduce their greenhouse gas emissions.

In Uganda, NORPLAN is carrying out studies on potential sites for small hydropower development.

In Ethiopia, NORPLAN participates in a Joint Venture that is carrying out feasibility studies for the large hydropower projects Baro 1 and 2, and Karadobi.



Rice fields in Laos



Surveyor at Kikagati, Uganda

Natural Resources

While rivers and water-bodies may be developed for hydropower production, water is in great demand for other use such as for drinking water, irrigation, industrial use, as a recipient, and for use such as for fishing, aquaculture, transport, and recreation. This leads to competition between different stakeholders, particularly where one way of water resources use excludes another. For decision-makers and stakeholders to reach decisions on how to utilise water resources, detailed analysis of the physical and economic potential of the various combinations of use is needed. In addition, the economic, environmental and social impacts of different alternatives need to be clarified. NORPLAN has specialised in water resources planning and management from the national strategic level down to river basin or catchment level, and to identification and planning of individual projects. In Vietnam, NORPLAN is participating in a joint venture that is working on phase II of the National Hydropower Masterplan, now carrying out detailed studies for individual projects and their combined benefits and effects.

Increasing attention is being paid to management of international rivers and waterbodies, and the establishment of mechanisms and institutions that can improve dialogue and decision making on how to best manage water that is shared among two or several nations. Mozambique is an example of a country where most of the large rivers originate in neighbouring countries. NORPLAN has had a role in Mozambique as advisor on negotiation on management of international rivers for the National Directorate of Water.

The management and use of modified waterbodies also needs attention, something which is being addressed with the introduction in the European Economic Area of the EU Water Directive. NORPLAN has been involved in developing guidelines for registering and categorising and mapping of waterbodies in Norway according to their qualities and present use. This enables institutions involved in water resources management to prioritise between waterbodies when deciding on new developments and to adapt management practices to the specific modifications of each waterbody.

Among stakeholders, impacts of developments will vary according to how they relate to the resource base. NORPLAN has specialised in methodologies for environmental and social impacts assessment, and cumulative and strategic impact assessments. Cumulative Impact Assessments seek to analyse and predict the impacts of one specific development project in addition to those caused by other nearby developments in different sectors.

Strategic Impact Assessments look at the combined impacts of a range of existing and planned developments within one specific sector. Both types of studies are concerned with environmental and social issues not covered by project specific EIA's and provide a basis for integration of environmental and social concerns into long term planning. In this way it is possible to accommodate the interests of the various stakeholders at an early stage, in order to minimise damages, incorporate mitigation measures into project planning and development, and adapt project planning to the existing situation.



Delineation of Water Bodies in Southern Suldalslågen in Norway



3D map Melamchi Valley, Nepal

Spatial Planning and GIS

Planning and decision making, stakeholder participation and public debate about proposed projects, their alternatives and their consequences for the surrounding environs are only meaningful when the essential elements are understood by those debating and making decisions. Comprehensive studies are of limited value if the location and physical features and the implications of a development are not well understood. To this end Geographic Information Systems are valuable and powerful tools for analysing and presenting projects and data, including the possibility to compare and visualise a number of project alternatives and consequences at an early stage and at a reasonable cost.

NORPLAN provides a full range of GIS services, including the development of GIS databases, with system and equipment specifications and procurement. We also provide services for web based GIS solutions. This includes closed systems for administrative use, as well as systems that are open to all internet users.

In Abu Dhabi, UAE and Oman, NORPLAN is engaged in developing integrated GIS data management systems for urban planning.

An outcome of the GIS Integration project in Abu Dhabi, is a comprehensive student-exchange program between Higher Colleges of Technology, UAE and Agder University College, Norway. Already 7 Norwegian students have been in UAE while 5 students from UAE have been to Norway. Students from UAE have also had workplacements in NORPLAN.

Water Supply

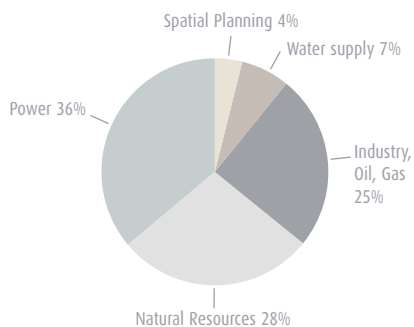
It is estimated that more than one billion people do not have access to safe drinking water. Often water supply is non-existent, or inadequate in terms of quantity or quality. Public water supply networks may be old, badly maintained and leaking and water purification not satisfactory. NORPLAN provides services for water master planning, water treatment, water pumping stations, transmission and distribution networks, network modelling, and leakage detection and control.

To carry out the tasks above, utilities need a well functioning management structure, and a sound economic basis. NORPLAN provides assistance on utility management and institutional development.

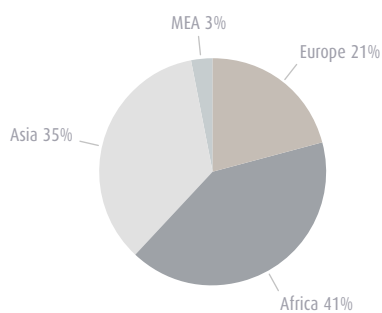
NORPLAN has gained substantial experience in water supply rehabilitation in conflict or post-conflict zones, including the Palestinian areas and in Bosnia & Herzegovina and Kosovo. During 2004 NORPLAN carried out work to detect leakages and upgrade the water supply systems, and to develop several water utilities in the Vrbas region in Bosnia & Herzegovina. NORPLAN is also working on a contract for institutional strengthening of the Palestinian Water Authority.

In Uganda NORPLAN carried out work to provide the Government of Uganda with a strategy for management of the country's water resources at the local, national and regional level. Included are a national strategy for the management of trans-boundary water sources, a study on the enabling environment for water resources, and a strategic investment plan for the water resources sector.

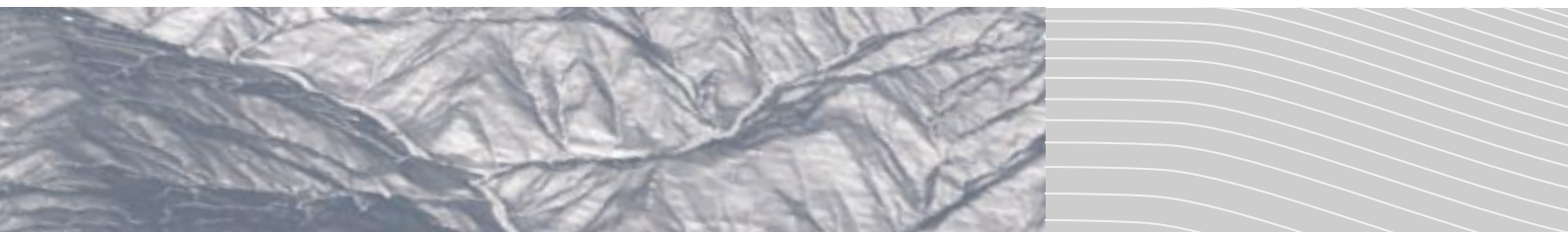
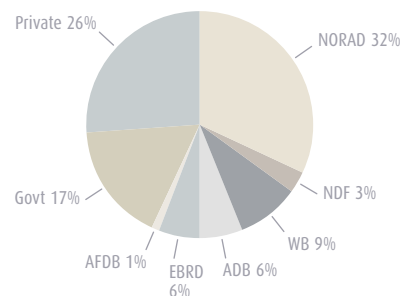
DISTRIBUTION OF DIVISION TURNOVER 2004



REGIONAL DISTRIBUTION OF TURNOVER 2004



CONTRACT FINANCING 2004



Key Figures 2004

In 2004 NORPLAN's turnover reached 101 million NOK, which compares favourably with the best years.

Turnover from operations in Africa increased by a substantial 32% compared to the previous year. Turnover from operations in Asia increased by nearly 10%. Contracts in Europe more than doubled compared to the previous year. Our turnover from contracts in the Middle East saw a marked decrease due to completion or near completion of old contracts without being able to secure substantial new contracts.

Contracts financed by the Asian Development Bank and the EBRD saw an increase in 2004, while, turnover from contracts financed by the World Bank and bilateral donors such as NORAD and SIDA declined. Turnover from contracts financed by private companies or by government institutions increased.

A general trend in the market is that Clients demand a higher percentage of work done locally, and less home office time. There is also a marked trend to have a larger percentage of local content and less input from international companies in contracts. While this is to the advantage of local companies and may reduce costs in the short run, it places a greater risk and responsibility on international companies that have to supervise large locally produced components with less time input of their own. NORPLAN is constantly looking at ways to respond to these requirements while securing the quality of our services.

KEY FIGURES 2003	NORPLAN AS		NORPLAN GROUP	
	2004	2003	2004	2003
NOK 1000				
Turnover	101 147	92 625	920 878	816 342
Profit before finances	-416	97	40 469	43 688
Profit before tax	-380	189	53 708	18 162
Profit after tax	-380	121	36 564	13 705
Total assets	8 294	3 609	556 975	398 779
Total equity capital	3 065	3 446	239 795	221 384
Equity share in percent	37	95	43	55

SELECTED NEW CONTRACTS 2004

COUNTRY	PROJECT NAME
Afghanistan	Electricity Transmission and Distribution Project
Angola	Private Sector Study
Bhutan	Establishment of Druuk Hydropower Corporation
Ethiopia	Feasibility Studies Baro – Karadobi Hydropower Projects
Kenya	Optimisation of Kiambere Hydropower Station
Kenya	Rehabilitation of Masinga Dam
Kenya	Distribution Network Reinforcement Study
Lao PDR	Nam Theun II Hydropower Development Project
Lao PDR	East - West Corridor Studies
Norway	Framework Agreement with NORAD
Oman	GIS Integration Project
Russia	Potential for Smaller Hydropower in the North West
Russian Federation	Potential for Development of Small Hydro Ingusethia
Uganda	Small Hydro Studies Western Uganda

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