

REVIEW OF INSTITUTIONAL COOPERATION  
BETWEEN EDM (MOZAMBIQUE) AND NVE (NORWAY)

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C O N T E N T S

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AND NVE (NORWAY) PROGRAMS (VALUATION)

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## INSTITUTIONAL COOPERATION BETWEEN EDM (MOZAMBIQUE) AND NVE (NORWAY): A PROGRAMME EVALUATION

### 1 General background

The original consideration for establishing an institutional cooperation programme between EDM and NVE was presented by some of the key initiators; A. Vinjar (Director General of NVE), F. Juliao (General Manager of EDM) and J. Storaas (Head of Energy and Tele Division, NORAD), in a paper to a symposium in Dakar in 1985 (F. Juliao et al; 1985). In their paper they argue that in industrialised, as well as in developing countries, there is generally more concern with planning, establishment and implementation of new projects, than with securing the smooth running of an established system.

This, they argue, is also apparent in the process of cooperation between different countries, particularly in the energy sector. The most extensive cooperation between industrialised and developing countries in the energy field is largely project oriented which logically requires a project adapted organisation within the energy authorities in the developing countries. This often leads to a discontinuous process of cooperation with several changes of partner, and led them to address issues. How should cooperation be organised to overcome the problems of repeated interruptions to the links, established between individuals and institutions in developing and in industrialised countries? How can durable ties and relationships be established, developed and maintained between professionals and professional bodies in developing countries, between other developing countries, and with industrialised countries?

In an attempt to resolve some of these problems, they saw institutional cooperation as an alternative to the project organisation. These questions were the subject of extensive





debate in Norway in the late seventies. The involvement of non-commercial professional bodies was one feasible arrangement. This had, of course, to be on terms acceptable to the developing country.

It is against this background that institutional cooperation between the NVE in Norway and EDM in Mozambique was formulated, with hopes of overcoming the limitations within the project approach in the energy sector.

### **1.1 The institutional setting of the programme**

The general agreement between Norway and Mozambique, for cooperation for the promotion of the Economic and Social Development of Mozambique, states that energy is a major sector for collaboration. Pursuant to this statement, a specific agreement on institutional cooperation between EDM and NVE was incorporated as part of the general agreement.

The Norwegian Water Resources and Electricity Board (NVE) was, at the time of entering the agreement in 1980, a non-commercial government body, partly authority and partly executing agency in the field of hydropower, electricity supply and energy. NVE's field of activity comprised at the time, inter alia, energy system planning, water resources registration and planning, hydrology, environmental planning, licensing, as well as planning, construction and technical operation of the state-owned power system. Legal and economic questions, laws and regulations relating to these fields, as well as public safety concerning electrical installations also formed part of the domain of NVE. NVE was, at the time, divided into three directorates, namely one for energy system planning, one for water resources utilisation and one for the planning and running of the state-owned power system. In January 1986, the power system directorate was established as an independent organisation, implying that the

exists in Norway in the late seventies. The development of non-  
commercial (professional) bodies was one result of this movement. This  
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between the VVE in Norway and ERM in Scotland was demonstrated.  
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### 1.1 The institutional setting of the project

The general agreement between Norway and Mozambique for  
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The Norwegian Water Resources and Electricity Board (NVE) was  
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as planning, water resources, distribution and planning,  
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power system. Legal and economic guidelines and regulations  
relating to these fields, as well as public and consumer  
electrical installations also formed part of the field of NVE.  
NVE was at the time divided into three departments, namely one  
for energy system planning, one for water resources and electricity  
and one for the planning and running of the state-owned power  
system. In January 1985, the power system was reorganized and  
redefined as an independent organization. It was that the

directorates of primary interest to EDM was no longer part of the NVE.

Electricidade de Mozambique (EDM) was established in 1977 and is responsible for the national supply of electricity in Mozambique. The system dates back to 1950-60 and consists of regional networks with diesel, hydro, natural gas and coal driven generating units for electricity production. EDM is placed under the Ministry of Industry and Energy.

## **1.2 The objectives of the programme**

The objective of the agreement was to strengthen the organisational set-up and administrative capacities of EDM. To achieve this, NVE and EDM were defined as sister organisations. A similar agreement has been entered into between NORAD and NVE, giving NORAD the right to draw upon NVE's expertise in any fields covered by NVE, for the benefit of NORAD, in its collaboration with any developing country.

The rationale of the agreement was based on the understanding that NVE possessed a well organised and experienced, professional staff, with capacity to contribute to international cooperation beyond its domestic activities, while EDM suffer from a lack of professional and experienced manpower to undertake the tasks with which the institution is charged. Through the institutional cooperation, EDM could make use of the professional capabilities of NVE, NORAD provide the financial support to implement this cooperation.

Cooperation was not intended to be limited to the fields supported by Norwegian finance or to NVE's fields of activity.



## 2. Organisation and implementation of the programme

The terms of cooperation were worked out to cover the following basic conditions:

- i) Long term cooperation, based on close and confidential contacts between the two institutions;
- ii) Cooperation is executed directly between EDM and NVE, without involvement of any third party.
- iii) EDM needs to be requested directly to NVE who release competent staff to handle the matter.
- iv) Formalities are restricted to a minimum and ensure the widest degree of adaptability and flexibility maintained.

The practical organisational arrangement for the execution of the cooperation, is essentially as follows:

- \* A Liaison Engineer (LE) is recruited from NVE staff on behalf of EDM and stationed at EDM in Maputo. Originally the Liaison Engineer was a specific position but from 1987 the function was assigned to one of the three NVE positions within the Planning Department of EDM (CAPLA).
- \* Among the NVE staff, a Contact Engineer (CE) is appointed in Oslo. The CE conveys all requests from the LE at EDM to the appropriate NVE division. The CE acts, at the same time, as a contact between NORAD and NVE for the execution of the general agreement on services, which NORAD may require from NVE.
- \* NVE draws from its own staff, or from other sources in Norway, professional consultants to investigate the services are requested from EDM, professionals on long-term assignment are required to enter into executive functions in EDM.



- \* Through mutual visits, the NVE and EDM staff are given the opportunity of establishing personal and durable ties between the individuals of the institutions.
- \* To compensate for the services performed under these agreements, NVE is permitted to exceed its annual salaries budget by the equivalent of a total of some 50 man months. This arrangement is based on a man-hour accounting system between NVE and NORAD. NVE employees do not obtain any extra financial benefits during short term engagements for EDM.

### 3. Achievements during 1980 - 89

The first agreement on institutional cooperation was entered into in 1980, covering the period 1980-83, with a budgetary framework of NO.KR 2 million per year, to finance the services connected with the cooperation between the NVE and EDM. The agreement was renewed in 1984, covering the period 1984-87, with a budgetary framework of NO. KR. 3 million per year, and for 1987-90, with a budgetary framework of NO. KR. 3-5 million per year.

To support the cooperation agreement particular attention is paid to Norwegian commodity assistance to EDM. This assistance includes a variety of relevant items such as spare parts, tools, transformers, circuit breakers, equipment for the distribution system etc. Purchase requests, financial assessments and general approvals are normally subject to an annual meeting with participation of representatives from both NVE and EDM.

EDM, NORAD and NVE all regarded training activities as a main element in the cooperation. For reasons of language, some of these activities are implemented through a cooperation between EDM and Electricidade de Portugal financed by NORAD as a specific project.

Through annual visits, the WVE and FBM staff are given the opportunity to establish personal and working relationships. During the initial phase of the project, the WVE and FBM staff are given the opportunity to establish personal and working relationships. During the initial phase of the project, the WVE and FBM staff are given the opportunity to establish personal and working relationships. During the initial phase of the project, the WVE and FBM staff are given the opportunity to establish personal and working relationships.

### 3. Achievements during 1980 - 82

The first agreement on financial cooperation was signed in 1980, covering the period 1980-82, with a budgetary framework of 10.000 million per year. This agreement was renewed in 1981, covering the period 1981-83, with a budgetary framework of 10.000 million per year. This agreement was renewed in 1982, covering the period 1982-84, with a budgetary framework of 10.000 million per year.

To support the cooperation agreement, financial assistance is paid to Norwegian companies by assistance to FBM. This assistance is used for various purposes, including: (a) purchase of general machinery and equipment, (b) purchase of general machinery and equipment, (c) purchase of general machinery and equipment, (d) purchase of general machinery and equipment, (e) purchase of general machinery and equipment.

FBM, WVE and WVE are registered training activities as a main element in the cooperation. For reasons of efficiency, some of these activities are implemented through a cooperation between FBM and Electric House in Portugal. It should be noted that the project is a joint project.



Through its own staff, or by assignment from other Norwegian professional sources, NVE has been involved in a number of projects in Mozambique which include:

1980 - 89:

- \* The planning and implementation of a pole impregnation plant;
- \* The establishment of a statistical department in EDM;
- \* Advisory services in connection with contractual renewal of the agreement for the Cabora Bassa scheme;
- \* The implementation of a systematic maintenance programme for hydropower and transformer stations;
- \* Advisory services at all stages of two small hydropower plants, both financed by Norway;
- \* A hydrology simulation model has been adapted to the hydrological system of SHER (Sociedade Hidroelectrica do Revue) in the central region of Mozambique;
- \* Assistance in drafting the EDM Annual Report 1987 and 1988;
- \* Creation of a new model for the organisation of an electricity utility, e.g. Cuamba.

A change in the organisation set-up of EDM, in 1988, established the Planning Department (CAPLA) as the department through which a great part of the Institutional Cooperation would be organised. For some time, CAPLA and its Director, Eng. Nicolau, have been located in separate buildings. This problem was apparently solved in the middle of November 1989 when CAPLA moved to new premises.

During the annual meeting on power cooperation held in Oslo in December 1989, it was stressed, within the protocol of the meeting, that one of NORAD's principal intentions with the institutional cooperation is to help the Planning Department of the EDM (CAPLA) to be self-sufficient and more independent of foreign consultants. To reach this goal, it was agreed between the two parties that EDM shall, by May 1990, prepare a plan for

Through the own staff, or by assignment from other Norwegian  
governmental sources, VVE has been provided with a number of  
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1989-1991

The raising and development of the organization  
1987

\* The establishment of a statistical department in 1987  
\* Advisory services in connection with national and regional  
of the agreement for the labor market strategy  
\* The implementation of a systematic programme  
for the development and transformation activities  
\* Advisory services at all stages of the early power  
plans, as proposed by Norway

\* A hydrology simulation model has been developed in the  
hydrological system of SIA (Sjøsandskollen Hydrological  
Scheme) in the central region of Norway  
\* Assistance in creating the ESM (Energy Management System) and  
\* Creation of a new model for the optimization of  
electricity supply, e.g. OSM

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the Planning Department (GABIA) as the department through which  
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During the annual meeting on power regulation held in Oslo in  
October 1989, it was stressed, within the framework of the  
meeting, that the role of GABIA should be defined in relation to the  
institutional context. It is to be noted that the content of  
the ESM (GABIA) is a self-organizing system. The relationship  
foreign consultants. To reach this goal, a close relationship between  
the two parties was established by the Norwegian government for

CAPLA, indicating staffing needs and a comprehensive training programme, NORAD is prepared to consider support of the manpower development and training programme. NORAD suggested that the candidates should have a secondary school qualification. The plan will cover the training in Mozambique and other countries. The training should cover the disciplines of economics, statistics, engineering, and computer science and must make the best possible use of local educational facilities. It was agreed within the meeting that terms of reference for the Norwegian staff of EDM will be reviewed against EDM's proposed staff development programme.

#### **4. Assessment of results by EDM and NVE staff**

##### **4.1 The Mozambican perspective**

The general management of EDM appears to be satisfied with the ongoing energy cooperation with Norway. They stress the style of equal working relationships, especially where, for example, it is possible to disagree without negative repercussions. However, although they praise individual effort, they raise questions about the effectiveness of institutional cooperation.

The Mozambican perspective notes that NVE, in general, no longer recruits personnel from within NVE. Therefore the model of cooperation between departments of the two organisations, EDM and NVE no longer functions. One of the reasons for this appears to be the reorganisation of NVE which left the power utility branch - which is of major interest for EDM - outside the NVE set-up.

Secondly, the Mozambicans find that the Norwegians recruited are not always suited for the task. Bluntly, Mozambican management finds that a number of the expatriates sent to EDM have chosen to work at EDM because in some way or other they have failed in



their career in Norway.

Thirdly, the Mozambican management characterise several Norwegians, a people who are working for the first time in a developing country in their career and are therefore unable to work within loose and ill-defined systems. Consequently, they are not geared to take initiatives. They balance this criticism by praising some Norwegian technicians as young and very enthusiastic.

In practise, therefore, the content of the institutional cooperation has changed from a Mozambican perspective. Firstly, they see the potential of Norwegian technicians resolving concrete tasks including feasibility studies. Quite simply, they are 'gap-fillers'. Secondly, the Norwegian technicians recruited by NVE have an important indirect function in making the Norwegian consulting firm NORCONSULT work effectively since NORCONSULT is keen to keep its contract on hydropower studies.

Surprisingly, the management of EDM finds that training of Mozambican counterparts cannot be justified as an objective in itself for the NVE technicians. The reason is partly that it is still unrealistic to find Mozambicans at the graduate-level and partly that the EDM management wish to focus their training efforts at lower levels.

#### **4.2 The Norwegian Perspective**

The Norwegian management of the institutional cooperation programme find that, generally speaking, it has not been possible to implement the original concept of institutional cooperation.

One of the reasons for this is the institutional changes in NVE - leaving the power utility directorate outside NVE - and the brain-drain from the NVE to the Norwegian oil sector. With these

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changes, NVE has had insufficient resources to make the institutional cooperation function according to the original concept.

Other reasons for the lack of implementation of the original concept are found in the situation of Mozambique which, in the course of the 1980's, has been increasingly dominated by war. Although they find that the EDM is, comparatively speaking, a competent and efficient organisation, which is capable of coping with the special demands that the war situation raises, the very war situation itself has changed the contents of cooperation from long-term to short-term activities.

The perspective of the Norwegian expatriates, who have worked in Mozambique through the 1980's, shows a major shift in terms of contents of cooperation when NVE changed from recruitment among its own personnel to Norwegians coming from outside NVE. During the time of recruitment of personnel from within NVE, it was much easier to direct requests about the needs in Mozambique to the relevant persons in NVE and easier to obtain a solid backing. It appears that the persons recruited from outside NVE to work in EDM have neither the intimate knowledge about the resources to be found within NVE, nor the authority to mobilise those resources.

All the Norwegians interviewed about their experience in working at EDM are very unhappy about the lack of counterparts and lack of quantifiable objectives in training. They also find it difficult to understand and accept that EDM, during the 10 year span of cooperation, has not been able to identify counterparts who could benefit from the presence of the Norwegian expatriates. For the Norwegian personnel, it is not so much the concrete form of transfer of knowledge, i.e. day-to-day training by means of counterparts or formal training within courses, but the frustration that they work more or less in isolation on specific tasks as 'gap-fillers'.





## 5. Conclusions and recommendations

The present institutional cooperation appears to be performing less than optimally in the area of the transfer of knowledge and technology. One reason for this is that the programme lacks a clear plan for these goals. Norwegian consultants are often used for 'gap-filling'. In the future, it is essential that the training component is strengthened and that a plan for reducing the technical dependency in the medium term is elaborated.

The present institutional cooperation appears to be performing less than optimally in the area of the transfer of knowledge and technology. One reason for this is that the programme lacks a clear plan for these goals. Norwegian consultants are often used for 'sparring'. In the future, it is essential that the training component is strengthened and that a plan for reducing the technical dependency in the medium term is elaborated.



