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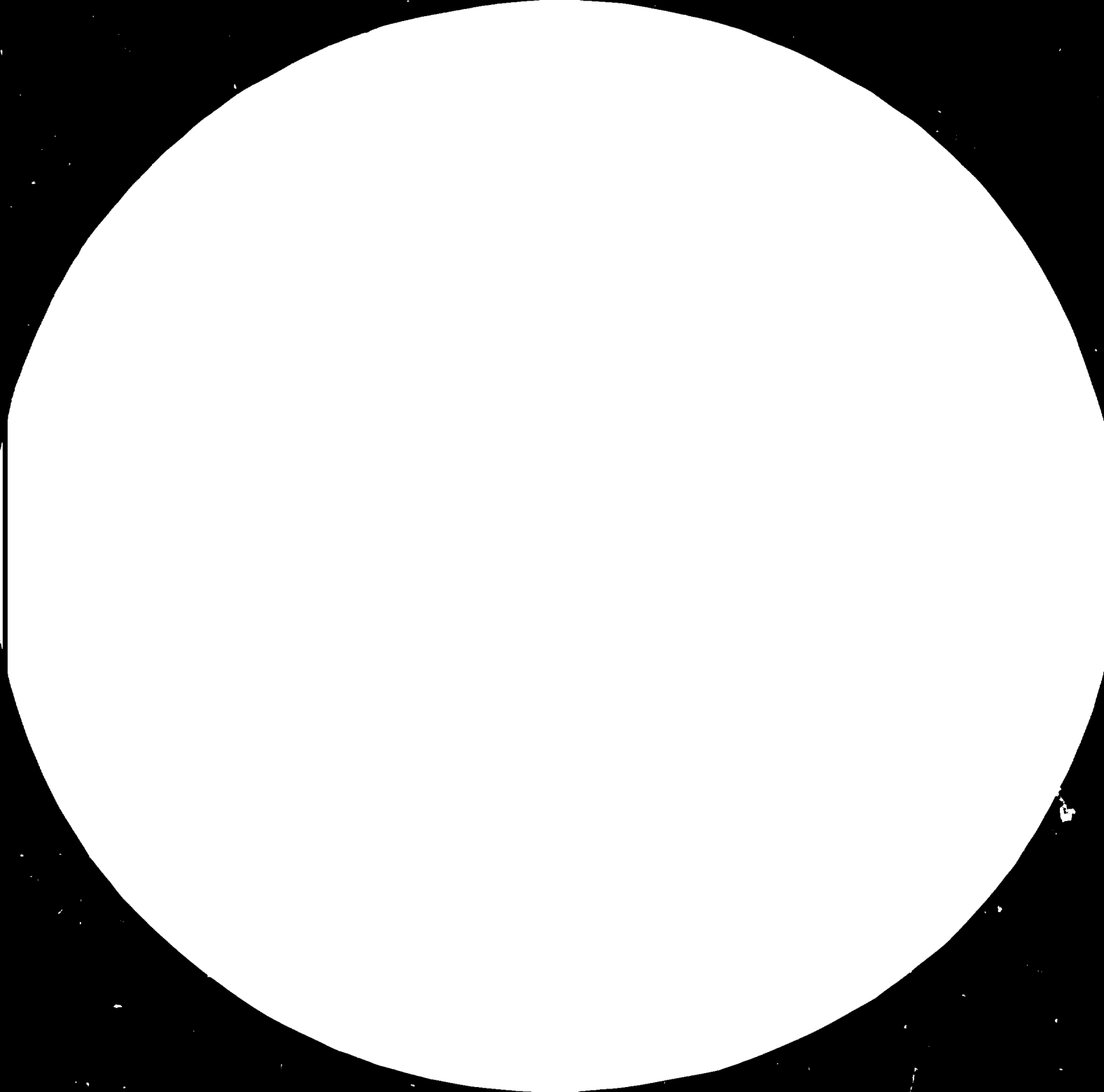
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CONSULTATION AND FORMULATION
OF A SPECIFIC PROGRAMME OF ASSISTANCE
IN THE DEVELOPMENT OF THE LOCAL BUILDING INDUSTRY
AND OF ENERGY SOURCES IN RURAL AREAS

DP/CMR/80/011

Report of Mission

to

Cameroon and Kenya (HABITAT)

5 - 16 January 1981

by

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- II ABBREVIATIONS
- III JOB DESCRIPTION : Consultant en construction

I INTRODUCTION

1. Background and Purpose of the Mission

On 10 October 1980, the Resident Representative of UNDP in Cameroon forwarded an official Government request to UNIDO for a project identification mission covering the following fields of the industrial sector:

- a. Habitat: development and use of local construction materials;
- b. Non-conventional energy sources: bio-gas, solar energy etc.;
- c. Energy for rural areas: mini hydro power generation plants.

Following an exchange of cables between UNDP Yaoundé and UNIDO, it was agreed to let the mission comprise four consultants for one month each in the following fields:

- a. Consultant in Building Materials
- b. Consultant in Local Construction Techniques
- c. Consultant in Non-Conventional Energy/Mini Hydro Power Plants
- d. Consultant in Mini Hydro Power

as well as Headquarter missions. It was further agreed that UNIDO would be the Executing Agency with HABITAT and CNRET (DTCD) as Associated Agencies for the posts b. and d. respectively. Advance Authorization for this assistance financed under project number CMR/80/011 was pouched to UNIDO by UNDP Yaoundé on 22 December 1980.

Meanwhile, UNDP had informed UNIDO of the importance attached by the Government to the presence of a UNIDO mission in respect of this project during the visit from 5 to 10 January 1981 of Mr. Dookingue, Director of the Regional Bureau for Africa, UNDP, N.Y. Consequently, it was agreed that the writer should undertake a mission to Yaoundé during this period and at the request of HABITAT, it was further agreed that Mr. Mark Hildebrand of its Technical Assistance Division would participate in this mission.

The main purpose of the mission was to assess the Government's intentions and expectations to the forthcoming consultant missions, to define to the extent possible the organizational framework within which they will take place and to draw up the terms of reference for the four consultants.

Taking advantage of the fact that the mission coincided with a series of general and sectoral meetings held from 6 to 10 January with the participation of M. DooKingue, UNDP and Agency staff and representatives of the relevant ministries for the purpose of preparing the 3rd Country Programme (1982-86) for Cameroon, a secondary purpose of the mission was the participation in these meetings to gain a better insight in the Government's requirements and to be available for questions related to UNIDO's potential contribution.

The purpose of the subsequent stopover in Nairobi, Kenya was to discuss with HABITAT staff the modalities of the future co-operation and to explore the scope for extending and strengthening this co-operation both within the framework of the present project and in general.

2. Work Programme

During the writer's stay in Yaoundé from 6 to 13 January 1981, his time was divided among two major groups of activities:

a. Participation in meetings organized by the Ministry of Economy and Planning for the formulation of Cameroon's 3rd Country Programme:

- Opening plenary meeting
- Ministry of Agriculture
- Ministry of Mines and Energy
- Ministry of Economy and Planning
- General Delegation for Scientific and Technical Research (DGRST)
- Ministry of Urbanism and Housing
- Closing round-up plenary meeting

b. Meetings with representatives of ministries and parastatal organizations (please see list of persons met attached as Annex I) related to the formulation of terms of reference and institutional framework of the preparatory missions in the field of building materials and energy scheduled for the near future:

- Directorate of Planning, Ministry of Economy and Planning
- Directorate of Industry, Ministry of Economy and Planning
- Ministry of Urbanism and Housing
- Ministry of Mines and Energy
- Directorate of Rural Development, Ministry of Agriculture
- Directorate of Construction, Ministry of Public Works
- General Delegation for Scientific and Technical Research
- CFC
- MAETUR

During the subsequent stopover in Nairobi from 14 to 16 January 1981, the writer held discussions with officials in the HABITAT Headquarters on the modalities of the joint implementation of the building materials and construction project in Cameroon as well as on other projects offering a potential for co-operation between HABITAT and UNIDO.

II COUNTRY PROGRAMMING EXERCISE

During the period 6-10 January 1981, a comprehensive series of meetings was held in the Ministry of Economy and Planning under the chairmanship of the Vice-Minister of Economy and Planning or his representative and with the continuous participation of Mr. Dookingue and other UNDP staff. UNIDO was represented by Mr. Benbouali, SIDFA (at most of the meetings) and Mr. Willot, JPO and the writer (at the most relevant meetings).

Sectoral meetings were held with 15 Ministries, 2 Delegations and 1 Office. Representatives of a total of 11 UN organizations were present during one or several of the meetings.

The meetings were basically structured as dialogues between Mr. Dookingue and the Ministry of Economy and Planning on the one side and the representatives of the ministry under consideration on the other side. The latter made a presentation of the projects presently under UNDP financed execution and of those for which UNDP financing was being requested for the 3rd CP cycle. Only occasionally was the representative of the (potential) executing agency requested to make brief comments on the programme presented, but in the presentations of the relevant ministries, it was obvious that a note prepared by the SIDFA/JPO team on UNIDO's proposed programme for the 3rd cycle dated 29 December 1980 had been carefully studied and taken into consideration.

Since a more detailed report on the outcome of the meetings may be expected from Mr. Benbouali, the following will be limited to a summary of those elements which are of particular relevance to the sectors of building materials and energy.

In his opening statement, Mr. Dookingue stressed the main areas in which UNDP assistance is superior to, or even irreplaceable by, bilateral assistance due to its inherent objectivity:

- identification and exploitation of natural resources;
- feasibility studies and, in more general terms, advice on the various development options available and the advantages or possible risks of the various alternatives;
- development of the sectors neglected during the period of colonialism;
- negotiation of contracts.

When presenting the tentative skeleton of the 3rd Cycle Country Programme or the main project themes retained following the discussions of the week, both Mr. DooKingue and the Vice-Minister of Economy and Planning stressed the selective character of the choices made and accentuated the priority given to projects generating welfare through exploitation of inter-alia agricultural, mineral, energy and human resources.

Besides other industrial projects such as assistance to CAPME, assistance in evaluation, negotiation and execution of projects, exploitation of bauxite, and development of industries based on natural oil and gas, the following projects were retained:

Development of building materials based on local materials

This project, presented by the Ministry of Urbanism and Habitat, aims at the identification of the potential for industrial manufacture of building materials based on available natural resources. It will focus on the production and utilization of these building materials in rural areas and will feature pilot production and construction schemes.

Formulation of a national energy plan

The Ministry of Mines and Energy presented this project which aims at producing a master plan for the future supply of energy to the country based on conventional as well as non-conventional energy sources.

Electrification of rural areas

Another project presented by the Ministry of Mines and Energy with the purpose of raising the percentage of the population with access to electricity (presently 22-23%) through conventional efforts (extension of power lines) as well as non-conventional schemes including mini hydro and thermal power plants.

III NON-CONVENTIONAL ENERGY

As mentioned in Chapter I, the project CMR/80/011 comprises in its early formulation a project identification mission in the fields of non-conventional energy including mini hydro power plants particularly with a view to speed up the rural electrification process. This harmonizes well with the project themes retained following the preliminary country programming exercise, i.e. Formulation of a National Energy Plan and Electrification of Rural Areas. referred to in Chapter II.

In July 1979, Mr. Swamy Rao, UNIDO Senior Interregional Adviser, carried out a survey of the state of development of energy related activities in Cameroon, the results of which were published in his mission report "Development and Promotion of Non-Conventional Energy Sources" (UNIDO/IOD/292). It remains the most comprehensive study on this topic (with reference to Cameroon) known to the writer and appears still to be a more or less valid account of the situation since little has changed in the meantime. The following information, based on the writer's own observations, may be taken as a supplement and/or an updating of Mr. Swamy Rao's report.

1. Government Policy

The Government attaches high priority to an integrated development of the energy sector based on optimal utilization of conventional as well as non-conventional energy sources. A rapid development of particularly the non-conventional technologies is encouraged and funds have been allocated to facilitate research and studies in this field.

2. Present Situation

It seems that very little has been done to implement the recommendations presented by Mr. Swamy Rao in his report. The energy requirements of the country are still exclusively satisfied from conventional sources, i.e. oil and gas as well as electricity generated by conventional hydro and thermal power plants. However, only 22-23% of the population have presently access to electricity and this percentage is not expected to exceed 30% by the year 2000 unless non-conventional energy sources are exploited.

The most important ministries and institutions interested or modestly active in the area of non-conventional energy development are:

- Ministry of Economy and Planning
Responsible for the overall planning of the country's development efforts including these in the field of energy;
- Ministry of Mines and Energy
The Directorate of Water and Energy is responsible for conventional and non-conventional energy generation and interested in other areas of non-conventional energy;
- Ministry of Agriculture
The Directorate of Rural Development is concerned with the promotion of increased energy availability in rural areas;
- General Delegation for Scientific and Technological Research (DGRST)
This organization, which has replaced ONAREST, comprises five research institutes of which the Institute for Geological and Mining Research (IRGM) has replaced IRTISS. This institute is inter-alia responsible for the research activities in the field of non-conventional energy including solar energy, biomass exploitation and nuclear energy. It's two relevant departments are Centre for Hydrological Research (CRH) which could identify suitable locations for mini hydro power plants and Laboratory for Energy Research (LRE). The Institute has formulated a work programme for LRE which will be discussed and presumably adopted by a board meeting on 21 January 1981;
- CENEEMA - National Centre for Studies and Experimentation in the Field of Agricultural Machinery
- The Polytechnic School of Cameroon
- The National Electricity Company

3. Activities Foreseen for the Near Future

- Department of Water and Energy

Presently the Department is planning to implement two studies for each

of which a budget of 20 million FCFA is available. These studies will be concerned with

- (i) identification of suitable locations for establishment of mini hydro power plants based on characteristics of rivers (fall, water volume etc.) and energy requirements
- (ii) charcoal production.

The Department's main interest is, however, rural electrification with equal attention to mini hydro power plants and thermal (wood fired) power plants depending on local conditions.

Very little has been done in these fields by the Department in the past and UNIDO co-operation would be most welcome.

- IRGM

As mentioned above, a work plan has been prepared for the activities of the Institute in the field of energy for the next few years. If not already initiated, all activities of this work plan are scheduled to start beginning of 1981. Of the three main programme elements, one, which is related to the recording of the solar energy potential in the Northern Province and the evaluation of the possibilities for its potential, is being sponsored by USAID which also has expressed its interest in participating in the follow up activities. A decision in this respect will be taken following a meeting with USAID scheduled for the end of 1981. The other programme element is concerned with nuclear energy and in this field, the Institute is co-operating with the IAEA. Considerable interest exists, however, in UNIDO co-operation in the execution of the third programme element which comprises the following three specific activities:

- Establishment of prototype furnaces for wood and charcoal;
- Study of the performance of biogas plants as a function of the type of waste used;
- Production of methanol by fermentation.

- The World Bank

As announced during one of the meetings in the Ministry of Economy and Planning, the World Bank will shortly submit a report on the various sources of energy available in Cameroon. Mr. Dookingue emphasized that future assistance in the field of energy should be a joint effort of CNRET(DTCD), the World Bank and UNIDO.

4. Conclusions and Recommendations

The development of the energy sector, particularly in rural areas, will be given a high priority by the Government in the years to come and UNIDO is expected to play a significant role. In the present initial stages concerned with programme formulation and specific project identification, UNIDO should demonstrate its capability to play a leading role in the future co-operation with the Government, the World Bank and CNRET (DTCD).

The two main areas in which UNIDO's participation is particularly called for are

- mini hydro power plants
- utilization of bio-mass including charcoal production, biogas and fermentation alcohol technologies.

It is strongly recommended that all future steps be taken in co-operation or understanding with CNRET in order to achieve maximum co-ordination of the activities of our two Agencies and to present a common, unified and comprehensive approach to the future development.

First step should be a joint mission of staff members from CNRET and UNIDO followed by the one month mission of two consultants (one selected by each organization) to be financed by the project CMR/80/011. Their basic task should be to formulate a plan of action and a Project Document for IPF-financing in the 3rd C.P. cycle.

IV BUILDING MATERIALS AND CONSTRUCTION

The request for preparatory assistance (CMR/80/011) identifies local building materials development and promotion of local construction techniques as priority areas for the next 5 years development. This was confirmed by the preliminary Country Programming exercise which retained a project theme related to the production and utilization of indigenous building materials in rural areas.

In an effort to define an appropriate scope and institutional framework for the future assistance, the joint mission of HABITAT and UNIDO contacted a number of officials representing a broad range of ministries and parastatal bodies for discussions of present and planned activities in the field of building materials manufacture, construction activity and rural development. The following is a condensed account of the information obtained.

1. Government Policy

The rational and effective exploitation of the country's natural resources, including the agricultural wastes, rank high on the overall list of priorities and building materials manufacture is one of the sectors with a significant potential in this respect.

In the construction and housing sector, the policy has been to promote the activities of parastatal bodies such as CFC, MAETUR and SIC and priority has been (and is still being) given to urban planning and development. However, the importance of reducing the growth rate of the urban centres, particularly Douala and Yaoundé, is now being fully realized and considerable emphasis is placed on activities favouring the development of housing and infrastructure outside these cities. The objective is to render the life in the secondary towns and rural centres (agrovilles) more attractive and thus to reverse the trends of the rural exodus as a part of the overall rural development policy.

2. Present Situation

In spite of an abundance of raw materials comprising non-metallic minerals such as limestone, clay, sand, pozzolana as well as wood and other vegetal materials, the building materials industry has not undergone any appreciable development over the past several years. Outside the traditional sector, the

overwhelmingly dominating material is cement and concrete which, however, is to a large extent still imported^{ed} (in 1978/79 about 350,000 tons) and with prices in 1978/79 of FCFA 20,953 in Douala and FCFA 28,390 in Yaoundé does not lend itself well to use in low cost housing. The dominating roofing material is corrugated sheet which also, to a significant extent, is imported (about 17,500 tons in 1978/79).

The Annual Statistical Note for 1978/79, from which the above figures have been taken, describe the situation of the building materials sector as follows: "Ce secteur continue d'enregistrer une progression modeste. La production en 1978/79 a été de 4.814 millions de francs contre 4.261 millions de francs en 1977/78, soit une augmentation de + 13.0%. La production du ciment est en hausse tandis que celle de matériaux de construction est en baisse."

Manufacture of fired clay bricks was a common artisanal occupation during the period of German colonial rule and was, until a few years ago, represented by a (now idle) mechanized brick plant in Yaoundé "Les argiles industrielles du Cameroun" producing 80-100,000 pieces (mainly hollow blocks) per month in a Hoffman kiln. However, since the closure of the Yaoundé plant, apparently due to inferior product quality resulting in excessive breakage during transport, brick manufacture is virtually non-existing apart from a few manual family operations (in the Eastern Province) and sporadic efforts of missions in connection with church construction.

In 1972, two UNIDO experts (Messrs. Bozanoviz and Sobek) recommended the increased utilization of local materials with emphasis on the replacement of the scarce and expensive cement (in concrete blocks and elements) by an inexpensive binder consisting of

50% pozzolanic material

30% lime

20% cement

as well as the increased use of lightweight volcanic aggregate. These recommendations do not seem to have been implemented but will, together with the supporting information contained in the experts' reports, provide a useful base for the future activities.

In the modern non-traditional construction sector, the results are a stereotype material application and excessive costs which, even in what is qualified as low cost housing, leads to a minimum monthly rent per housing unit

of FCFA 60,000 (approx. US\$275). The responsible authorities are well aware of the need to take steps to remedy this situation.

3. Institutions

A broad range of Government departments and parastatal bodies are responsible for, involved in or interested in various aspects of the building materials and construction sector. Besides the manufacturing industries, the most important institutions in this area comprise:

Ministère de l'Urbanisme et de l'Habitat

was established about one year ago and is composed of the following directorates:

- Direction du Logement et des Affaires Administratives
- Direction de Cadastre
- Direction des Domaines
- Direction d'Urbanisme et d'Habitat
is active only in the cities in the field of urban planning and housing in co-operation with SIC
- Direction de l'Amenagement du Territoire
is active particularly outside the cities and takes part in rural development in its broadest sense. It participates in FONADER and wishes to promote a revitalization of self help housing with upgraded materials

Ministère de l'Equipement

- Direction de la Construction
is responsible for civil engineering and public works including construction of schools and more important public buildings

Ministry of Economy and Planning

- Direction de l'Industrie
is concerned with industrial development

Ministry of Mines and Energy

- Direction de la Géologie
is responsible for geological surveys and would be the source of information on non-metallic mineral occurrences

Ministry of Agriculture

- Direction du Development Communautaire
has its own technical service. Local participation in projects is mandatory but there is considerable overlap with Genie Rural

- Direction du Genie Rural et Hydrolique

has technical service staff in each province (7) and in each department (40)

Office National de Participation au Développement

is another body which is active in the field of rural development with local participation

CFC "Crédit Foncier du Cameroun"

a parastatal body under the Ministry of Urbanism and Habitat which began in the rural centres but is now operating on a country-wide basis. Its actions are limited to loans for "low-income housing" for families with a maximum income of 110.000 CFA per month

MAETUR "Mission d'Amenagement et d'Equipement des Terrains Urbains et Ruraux"

is a parastatal body under the Ministry of Urbanism and Habitat, focusing mainly on land development. Its targets for the Fifth National Plan is 600 hectares of building sites per year corresponding to 13,000 units per year. During the Fifth Plan period for MAETUR which has, until now, been working only in Donale at Yaoundé, will begin to work in the thirteen secondary towns (populations over 20,000), but at the moment has no plans for its intervention in the 60 "agro-villes" (populations 3,000-20,000)

SIC "Société Immobilier du Cameroun"

is a parastatal construction company under the Ministry of Urbanism and Habitat concerned mainly with conventional construction techniques

FEICOM "Fonds d'Equipement et d'Interventions pour les Communes"

is under the direction of "Administration Territoriale"

FONADER "Fond National de Développement Rural"

is a parastatal body under the Ministry of Agriculture financed by the "Caisse de Produits de Base". FONADER has representatives in all seven provinces and functions as a bank for the financing of rural development schemes including housing - often in co-operation with Génie Rurale. Headquarters are in Yaoundé

FSAR "Fond Spécial des Actions Rurales"

is a special fund under FONADER which works only in the northern province.

A more complete list of names (and their abbreviations) of bodies with connections to this sector is presented in Annex

4. Ongoing Projects

The following projects were identified as presently ongoing activities in the field of low cost housing:

"Amelioration de l'Habitat Rural dans le Province de l'Est"

Executed by Genie Rural (Ministry of Agriculture) with assistance of Dutch volunteers. Assistance to rural population in the improvement of their habitat. Elaboration of plan types for housing to be financed by employer organisations such as "Socite de Tabac" and "SAPI". Presently using concrete blocks and corrugated sheets.

"Byemassi Pilot Housing Scheme"

Executed by "MAETUR" financed by "Crédit Foncier du Cameroun" in Yaoundé for 1981. The project will build 18 houses (low-cost) as a part of a large-scale housing operation executed by SJC and private contractors. The 18 houses are designed to be built by small scale contractors maximizing the use of local materials.

Crédit Foncier du Cameroun

- 1) A low cost housing scheme for workers employed by CAMSCO;
- 2) Housing schemes for small groups of pioneers (young agricultural workers) sent out to develop new agricultural settlements.

The "Direction des Etudes des Projets" (Ministère de l'Agriculture) has details and a comprehensive list of rural based agricultural development projects.

5. Conclusions and Recommendations

There is an important scope in Cameroon for the development of the manufacture of local building materials based on indigenous raw materials and well suited for use in low cost construction including traditional housing. Relatively little has been done in this field and the authorities are well aware of the need to broaden the range of building materials presently available.

There seems to be a consensus among the various bodies concerned that the future development should focus on the needs of the lower income groups particularly in the rural areas and should take the form of an integrated project comprising:

- increased rational exploitation of local natural resources including agricultural wastes;
- decentralized establishment of sample small scale manufacturing units;
- production of low cost durable building materials either of better quality than traditional ones or cheaper than conventional (non-traditional) materials;
- construction of pilot houses to demonstrate proper and economic use of new materials and techniques preferably in a traditional context.

The project should be initiated with a number of base studies required to define the optimum orientation of the action oriented phase. This phase should comprise a number of pilot activities (combined manufacture and construction) located in selected secondary towns or maybe even villages and should lead to a widespread promotion of the technologies developed and demonstrated.

It was agreed that a joint mission of a UNIDO Consultant in Building Materials and a HABITAT Consultant in Construction should be fielded for one month (as foreseen in the Preparatory Assistance Document) as early as possible and at any rate in time to pass on its conclusions and recommendations to the Government by the beginning of April 1981. The terms of reference of the consultants should be to formulate a plan of action and to draft the necessary related project documentation.

V DISCUSSIONS WITH HABITAT

Following the mission to Cameroon, the writer stopped in Nairobi to discuss the future co-operation in Cameroon as well as other matters of mutual concern.

1. Cameroon project (CMR/80/011)

The modalities for the joint execution of the project and of the preparatory assistance phase in particular were discussed with Mr. Lemarchands, Chief of the Section for Africa and the Middle East of the Division of Technical Co-operation as well as with the directly responsible officer, Mr. Hildebrand.

It was agreed that HABITAT would assume the role of Associated Agency within this UNIDO executed project and the UNDP conceived standard letter of agreement for interagency sub-contracting was studied and found acceptable with a few very minor adjustments. It was agreed that UNIDO would forward three signed copies to HABITAT for its approval. (This was done on 23 January 1981.)

As for the terms of reference of the two consultants to go on the joint project formulation mission, it was, after careful consideration, found advisable to provide them with identical Job Descriptions - apart from Post Title and Qualifications. The Job Description for the Consultant in Construction is attached in Annex III. The reason for assigning the same duties to both consultants was that all of these duties seemed to require the involvement of both consultants, albeit to considerably varying degrees and that it was found reasonable to leave the ultimate responsibility of who will perform which specific task with the consultants themselves.

It is thus the thought that the consultants after individual briefings in Vienna and Nairobi respectively will meet in Yaoundé where they will make up their work programme after a round of initial discussions with Government and UNDP officials. Most of the time they will probably work independently on specific aspects of the job but they will meet frequently to compare notes and there will be a considerable amount of feedback between them during the course of their mission.

The Terminal Report could be prepared jointly or consist of two individual parts with common introduction and recommendations and particularly the preparation of the plan of action and project documentation should be a co-operative effort. At the end of the mission, the consultants will be debriefed jointly, first at HABITAT Headquarters and finally at UNIDO Headquarters.

This closely integrated approach to joint execution represents an experiment for the two agencies concerned, but is hoped to prove an effective and inspiring formula for HABITAT/UNIDO co-operation to the benefit of the recipient country.

Three possible candidates for the post of Consultant in Construction (11-02) were considered and found substantively acceptable, and before the departure of the writer, the availability of Mr. Erbach for the end of February had been confirmed. It was agreed to aim for the fielding of the expert team around 25 February 1981.

2. Other Areas of Potential Co-operation

During the course of the discussions, the HABITAT officials stressed their appreciation of, and positive expectations to, the embryonic co-operation between our two Organizations. Co-ordinating activities or even, in certain cases, executing them jointly will be to the advantage of both parties and is expected to enhance the effectiveness of the assistance rendered. The present project will constitute the first concrete case of UNIDO co-operation with the Division of Technical Co-operation of HABITAT, but the potential other similar undertakings are considerable and a few concrete cases are already under active consideration.

Reconstruction of Masaka and Mbarara, Uganda

A HABITAT executed project "Assistance to the Development Authority" UGA/80/003 is presently under approval as is another UNDP financed project for UNIDO execution entitled "Development of Building Materials Industry". Copies of the documents have been exchanged and the UNIDO Consultant, Mr. Knizek, who prepared the Project Document, made a stopover in Nairobi at the end of his mission to brief HABITAT on the outcome.

Co-ordination of the execution of the two projects will be required both between Headquarters and in the field in order to achieve optimum results.

Assistance to the Capital Development Authority, Dodoma, Tanzania

For some time already, HABITAT has been involved in the planning of Tanzania's new capital city and an increasing need for the involvement of UNIDO in the area of building materials manufacture is being felt. A project identification mission should be the first step but the source of financing has not yet been defined.

Other Countries where Co-ordination of Activities are Considered

In a number of cases, HABITAT is presently executing projects in countries where UNIDO has reached the stage of project formulation. This applies to inter-alia the Gambia, Madagascar and Zimbabwe where an early exchange of information would permit the UNIDO projects to orient themselves towards the building materials requirements identified or created by the HABITAT projects which in turn might be able to adjust their activities to the projected availability of building materials resulting from the UNIDO assistance.

3. Conclusions and Recommendations

It was agreed to maintain a certain contact concerning these and other projects of mutual interest and the writer was given a complete list of ongoing HABITAT projects which shows that a global total of some 150 projects were expected to lead to a 1980 expenditure of about US\$13 million.

Since personal contacts were found to be particularly valuable, especially in connection with the practically ongoing activities in Cameroon and Uganda, it was suggested that missions of HABITAT officials via Europe and of UNIDO officials to or via East Africa be planned in such a way as to allow occasional stopovers in Vienna and Nairobi respectively.

LIST OF PERSONS MET

1. CAMEROON

Ministère de l'Economie et du Plan

Mme. Elisabeth TANKEU
Directrice de la Planification

M. Patrice MANDENG
Directeur des ressources humaines

M. Augustin NJAWÉ
Directeur de l'Industrie

Ministère de l'Agriculture

M. Henry MBEPI
Directeur Adjoint du Génie Rural et Hydrolique

Ministère de l'Urbanisme et de l'Habitat

M. Emmanuel NJAMEN
Secrétaire Général

M. Marc-Emile N'DIFO
Directeur de l'Urbanisme et de l'Habitat

M. MATHIEU
Direction de l'Aménagement du Territoire

M. AKAA
Bureau du Secrétaire Général

M. AMIOT
Conseiller Technique (Banque Mondiale)

Ministère de l'Equipement

M. Auguste MOUDOUMBOU ENDENE Joss
Directeur Adjoint de la Construction

M. Soulimanou NGBANGO
Section d'Etudes, Direction de la Construction

Ministère des Mines et de l'Energie

M. Edward SHEI
Direction de la Géologie

M. J. B. AGBORSANAYA
Directeur Adjoint de l'Energie et de l'Eau

M. Samuel MBAKOP
Sous-Directeur de l'Energie

Other Parastatal Bodies

M. Diallo SOBA
Directeur de l'Institut de la Recherche Géologique et Minière (DGRST)

M. Jean CASES
Directeur Général du Crédit Foncier du Cameroun

M. BODIOU
Directeur Général
Mission de l'Amenagement et d'Equipement des Terrains Urbains et Ruraux (MAETUR)

The World Bank

M. Raymond RABEHARISOA
Représentant Résident

United Nations Development Programme

Mr. Michel DOO KINGUE
Assistant Administrator
Director, Regional Bureau for Africa

Mr. Wali Shah WALI
Resident Representative

Mr. Abdenour BENBOUALI
Senior Industrial Development Field Adviser (UNIDO)

Mr. Hendrik VAN DER KLOET
Deputy Resident Representative

Mr. Bertrand COPPENS
Assistant Resident Representative

Mr. Patrick WILLOT
Junior Professional Officer (UNIDO)

2. KENYA

United Nations Centre for Human Settlements (HABITAT)

Mr. Guy LEMARCHAND
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Mr. Mark HILDEBRAND
Technical Adviser, Section for Africa and the Middle East

Mr. Kidane ALEMAYEHU
Project Manager, UNCHS project in Dodoma. Tanzania

Abréviations

AID	Agence Internationale pour le Développement
AFCA	Association pour la Formation des Cadres de l'industrie et de l'Administration
BAD	Banque Africaine pour le Développement
BASE	Bureau des Activités Socio-Economiques
BCD	Banque Camerounaise de Développement
BIRD	Banque Mondiale (Banque Internationale pour la Reconstruction et le Développement)
BIT	Bureau International de Travail
BTS	Béton de Terre Stabilité
CADZEP	Comité d'Action pour le Développement des zones Périphériques
CAMCUL	Cameroun Credit Union League
CAPME	Centre d'Assistance aux Petites et Moyenne Entreprises
CAZN	Comité des Artisans Zone Nylon
CCCE	Caisse Centrale de Coopération Economique
CCMA	Coopérative de Crédit Mutuel Artisanal
CEPEC	Centre d'Education à la Promotion Collective
CFC	Crédit Foncier du Cameroun
CNPS	Caisse Nationale de Prévoyance Sociale
CNRS	Centre National pour la Recherche Scientifique
CPB	Caisse Populaire Briqueterie
CPM	Caisse Populaire Mokolo
CPZN	Caisse Populaire Zone Nylon
COOPMUT	Direction de la Coopération et de Mutualité
CSE	Centre de Santé Elémentaire
CSD	Centre de Santé Développé

CU	Cellule d'Urbanisme (DUH)
CUD	Commune Urbaine de Douala
CUY	Commune Urbaine de Yaoundé
DCA	Direction de Cadastre
DCO	Direction de la Construction
DD	Direction des Domaines
DE	Direction de l'Enregistrement
DUH	Direction de l'Urbanisme et de l'Habitat
ENAT	Ecole Nationale de Technologie
ENSP	Ecole Nationale Supérieure Polytechnique
FDA	Fonds des Artisans
FED	Fonds Européen de Développement
FEMEC	Fédération des Eglises et Missions Evangéliques du Cameroun
FLSH	Faculté des Lettres et des Sciences Humaines, Université de Yaoundé
FOGAPE	Fonds d'Aide et de Garantie des Crédits aux Petites et moyennes Entreprises
FONADER	Fonds National de Développement Rural
GAZN	Groupement des Artisans Zone Nylon
IPD	Institut Panafricain pour le Développement
ISPEA	Institut de Statistique, de Planification et d'Economie Appliquée
LEM	Lotissement d'Equipements Minimum
LTPC	Laboratoire des Travaux Publics et de Construction
MAGZI	Mission d'Aménagement et de Gestion des Zones Industrielles
MAETUR	Mission d'Aménagement et d'Equipement des Terrains Urbains et Ruraux
MINEDUC	Ministère de l'Education Nationale
MINUH	Ministère de l'Urbanisme et de l'Habitat
MINAS	Ministère des Affaires Sociales
MINEP	Ministère de l'Economie et du Plan
MINTRAN	Ministère du Travail
OIT	Organisation Internationale du Travail
ONAREST	Office Nationale de Recherche Scientifique et Technique

ORSTOM	Office pour la Recherche Scientifique et Technique d'Outre-Mer
PDU	Projet de Développement Urbain (Etudes de Facibilité)
PDN	Plan Directeur, Douala Nord
PME	Petites et Moyennes Entreprises
PMI	Protection Maternelle et Infantile
PNUD	Programme des Nations Unies pour le Développement
QHS	Quartier d'Habitat Spontané
SATEC	Société d'Aide Technique et de Coopération
SIC	Société Immobilière du Cameroun
SMUH	Secrétariat des Missions Urbansime et de l'Habitat PARIS
SNEC	Société Nationale des Eaux du Cameroun
SONADIC	Société Nationale des Domaines Industriels du Cameroun
SONEL	Société Nationale d'Electricité
SOTUC	Société des Transports Urbains du Cameroun
SPASL	Service Provincial des Affaires Sociales du Littoral
STAR	Service des Trames Assainies et Rénovation (à la MAETUR)
TPE	Très Petites Entreprises
UCPY	Union des Caisses Populaires de Yaoundé
UNC	Union Nationale Camerounaise (Le Parti)
USAID	United States Agency for International Development
VRD	Voirie et Réseaux Divers.

UNITED NATIONS



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO

PROJET DU GOUVERNEMENT DE LA REPUBLIQUE UNIE DE CAMEROUN

CMR/80/011

DESCRIPTION DE POSTE

- Désignation du poste: Consultant en construction
- Durée de la mission: Un mois
- Date d'entrée en fonctions: Février 1981
- Lieu d'affectation: Yaoundé avec déplacements dans le pays.
- But du projet: L'objectif de la mission est, en coopération avec le Gouvernement, de formuler un programme intégré y inclus un document de projet pour le secteur de l'industrie de matériaux de construction. Le programme et le projet constitueront la base de l'assistance de PNUD dans ce domaine pendant la période 1982-86.
- Attributions: Le consultant sera affecté au Ministère de l'Economie et du Plan et devra, en étroite coopération avec un consultant de l'ONUDI et des représentants du Gouvernement, s'acquitter des tâches suivantes:
1. Examiner et apprécier d'un point de vue technique et économique les matériaux de construction actuellement utilisés, ainsi que leur approvisionnement;
 2. Faire un inventaire préliminaire des matières disponibles dans le pays susceptibles d'être utilisées pour la production de matériaux de construction;

Attributions (suite):

3. Etudier les activités présentes et les tendances futures dans le secteur de construction y inclus l'habitat traditionnel et estimer les besoins futurs en matériaux de construction divers;
4. Préparer sur la base les études préliminaires mentionnées ci-dessus des termes de référence pour les études de base suivantes (à être exécutées comme une partie initiale et intégrale du projet futur):
 - une étude qualitative et quantitative des matières premières utilisable pour la production de matériaux de construction dans les régions divers du pays;
 - une analyse et évaluation de l'habitat traditionnel dans les régions diverses du pays;
 - une analyse des normes de construction, la législation correspondante et les recommandations axées sur des matériaux de construction locaux;
 - des études de préfactibilité pour des unités de production des matériaux de construction et pour des projets de démonstration et de vulgarisation.
5. Proposer un programme d'action intégré visant l'étude et l'implantation d'unités de production de matériaux de construction appropriées pour le pays dans le but d'atteindre une certaine autosuffisance dans ce secteur par l'exploitation des ressources locales dans des unités de production décentralisées de petite et moyenne taille et sur cette base rédiger la documentation nécessaire pour l'assistance future de PRUD, ONUDI et l'CNUEH (HABITAT) dans le domaine de matériaux de construction.

L'expert devra également établir un rapport final exposant les conclusions de sa mission et ses recommandations au Gouvernement quant aux mesures que celui-ci pourrait éventuellement adopter.

Formation et
expérience requises:

Diplôme d'architecte et/ou ingénieur en génie-civil avec expérience professionnelle confirmée en matière de construction économique axé sur l'utilisation optimale des ressources humaines et physiques locales (développement des matériaux locaux - activités connexes) et ayant une bonne connaissance de préparation et de gestion des projets;

Connaissance linguistique: Français

Renseignements
complémentaires:

L'industrie de matériaux de construction est représentée au Cameroun par les deux cimenteries de CIMENCAM, une usine céramique à Douala et plusieurs entreprises de petite et moyenne taille produisant presque exclusivement des produits basés sur le ciment. La production de briques en terre cuite qui auparavant était d'une certaine importance a pratiquement cessé.

L'abondance de matières premières non métalliques susceptibles à fournir la base d'une plus ample production de matériaux de construction et les besoins croissants des matériaux d'une plus haute qualité ont aboutis à la réalisation au niveau du Gouvernement du besoin d'une industrie locale et intégrée.

Etant donné la nécessité d'une étroite coordination des efforts de développer l'industrie avec les besoins présents et futurs du secteur de construction les activités présentées ci-dessus seront exécutées en coopération avec l'CNUEH (HABITAT).

