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ECONOMIC COMMISSION FOR AFRICA

REPORT ON MISSION TO UGANDA
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by A. A. Carney
Regional Adviser
Cooperative & Aided Self Help Housing

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PART I

PREFACE:

1. Following news of a disastrous earthquake which had taken place in western Uganda during March 1966 and consequent on an urgent request for advice and assistance from the Government I was assigned by the Economic Commission for Africa, with BTAO's agreement, from April 3 - 15. to Uganda.
2. I emplaned for Kampala on Sunday April 3, and arrived on Monday April 4. Steps were immediately taken to meet the officials concerned, to visit the area and to otherwise become as fully conversant with the situation as possible. Two days were spent in viewing the damage, talking with officials and sufferers in the disaster and observing the rescue and relief measures in operation.
3. Hereunder is set out a list of the officials contacted in Kampala, Entebbe and the major disaster area of Bwamba County. To these persons and the many voluntary helpers, preachers, teachers, heads of families, local officials and others concerned in one way or another in helping to overcome the results of the disaster, but who would form too long a list for mentioning here, I extend my sincere thanks for the help so readily given under the very exacting conditions which obtained in the post earthquake period.
4. To the bereaved and the injured, I offer my sympathy.

List of Organisations and Persons contacted:

United Nations Development Programme:

Mr. C.K. Robinson, Resident Representative

Mr. A.A. Gurrin, Deputy Resident Representative

Ministry of Planning & Community Development:

Hon. John Kakonge, M.P., Director of Planning

Mr. V.A. Ovonji, Permanent Secretary

Dr. Brian Van Arcadie, Chief Planning Economist

Mr. Dallington K. Wamala, Social Worker, Youth Section

Mr. Ocaya, Community Development Officer

Mr. L.S. Ogwal, Senior Youth Organiser

Mr. S.H. Mungherera, Senior Community Development Officer

Mr. J.N. Kawuki, Principal Welfare & Refugees Officer

Mr. Owen Barton, Adviser on Community Development

Ministry of Minerals & Water Resources:

Dr. C.E.F. Williams, Commissioner of Geological Survey
& Mines Department

Ministry of Regional Administration:

Mr. M.H. Morgan, Chief Planner, Town & Regional Planning
Department

Mr. J.O.K. Inyoin, M.B.E., District Commissioner, Toro

Mr. E. Rusita, Assistant District Commissioner, Toro

Mr. Pavlon Mugoya, Assistant Administrator, Bwamba.

Ministry of Housing & Labour:

Hon. C.J. Obwangor, M.P., Holding the Portfolio of Minister,
Minister of Justice

Mr. H.H.T. Garrett, Housing Officer (Inspection & Training)

Mr. U.G.N. Bakeine, Senior Engineering Assistant

National Housing Corporation:

Mr. A.S.N. Kiwana, Chief Executive Officer

Catholic Mission Bugombwa:

Rev. Fr. Campare, Father Superior

Church of Uganda, Bumadu:

Rev. Nturanke

I.L.O.:

Mr. Eddie Johnson, Advisor, Rehabilitation of Unfit

INTRODUCTION:

5. During the early hours of March 21, the citizens of Kampala, capital city of Uganda, were suddenly awakened by a rather severe earthquake which shook the City and its environs. The first shock was followed by three others of lesser intensity and although buildings in the area were badly shaken, little actual damage was done and no lives reported lost.

6. The severity of the shock, however, ruined the seismograph of the Uganda Geological Department in Entebbe. Reports indicated that the force of the shock in Entebbe and Kampala was equal to force 4 or 5, half the

strength of a devastating earthquake.

DISASTER AREA:

7. The real devastating force of the earthquake was felt, however, in Bwamba County of the Kingdom of Toro, one of the five federal states of Uganda. This area, which is situated in Uganda's Western Rift Valley in the Lake Albert area, was determined as the epicentre of the earthquake.
8. No official statement was available up to the writing of this report but such reliable preliminary data as were to hand indicated that the earthquake was caused by a fault in the vicinity of the Ruwenzori Range, part of the Great Western Rift Valley. The effects of this shock were also felt in the eastern region of Congo (Leopoldville) which it adjoins.
9. Because of the scattered nature of the settlements, on the mountainside and in villages in the valley - connected only by footpaths - and the general nature of the terrain of the area, it was difficult to get an early assessment of the full extent of the damage. Nevertheless, it was known that one of the major areas of destruction was the township of Bundibugyo, the Chief Town of Bwamba, where the majority of the buildings had been flattened and several persons lost their lives.
10. To further complicate matters the tremors continued for several days after the first devastating period and many houses only partially destroyed previously, were finally shaken down. The townspeople were panic-stricken and took refuge out of their shattered homes in the streets and nearby fields. The more well-to-do slept in the cars or sought safety by flight from the area.
11. Communication to and from the area was cut off as the narrow serpentine mountain road joining Bundibugyo to Fort Portal, capital of the Toro Kingdom, was blocked intermittently by landslides which occurred during the period. Road gangs quickly cleared the debris to enable some vehicles to get through but trucks and large vehicles bringing supplies and building poles were unduly long in negotiating these unplanned for natural hazards.

WEATHER CONDITIONS:

12. Rain proved a further hazard to the people now out of shelter and also in restricting the collecting of data as it was not possible to reach some

districts as the regular bridge and fordings were down as a consequence of the now swollen rivers and streams. In Baramaddu, the Church and surrounding houses were destroyed as was the Catholic Church, Convent and the dispensary in Bundibugyo. In Fort Portal, Capital of the Kingdom of Toro, many houses were damaged and also the St. Johns and Virika Cathedrals. The latter so badly that it must now be demolished. The Omukama of Toro's Palace in Fort Portal was structurally undamaged although the walls, ceiling and floor suffered considerably from cracks of various dimensions.

TYPE OF CONSTRUCTION:

13. Few buildings were left standing, or failed to suffer serious damage in any of the areas seen. The traditional method of construction for houses was mainly mud and wattle with thatch, straw or corrugated iron roofing. These houses were totally flattened leaving a scattered heap of dried mud and rotted or termite-eaten poles and straw in the one case, or a roughly packed pile of wattle and mud under the former roof which now served as a well constructed corrugated iron cover. Larger buildings built by burnt clay bricks, solid or hollow concrete blocks, suffered a similar fate. The walls came tumbling down and the roof followed to rest on the pile beneath.

14. Nature, however, received considerable help from the type and quality of construction. It is to be noted that in the majority of cases of the wattle and mud buildings, many of these had become obsolete as their uprights were rotted or eaten cut by termites, thus a fairly strong wind might have been equally effective in destroying the building, on the other hand the brick and concrete block structures were either totally devoid of reinforcement of any kind or, so little reinforcement had been introduced, and that so badly, that it was of little help in keeping the building together when the tremors took place.

LACK OF SAFEGUARDS:

15. It may well be that disastrous earthquakes in the area are considered so few and far between and even tremors when they occur, so slight, that residents tend to forget that they are subject to this particular type of natural disaster and as a result, fail to take necessary precaution. Further, with huts constructed mainly of mud, after a few years, these

become dried out and their reed and wattle support, which are subject to termites, become ineffectual. Thus with a fairly heavy corrugated roof on, the danger of easy collapse, with the attendant hazard to life and limb, is heightened by the slightest tremor. Even if there is a thatch roof, the possibility of suffocation in the event of the falling of the building cannot be ruled out.

16. From the stories told by the residents and from the appearance of the demolished units, it seemed clear that death was due in many cases, not only to sections of the houses falling on the inhabitants, but to suffocation as well, or a combination of both.

17. Up to the time of writing of this report, the following incomplete figures were received on the toll taken by the disaster: deaths 104; injured 510; buildings damaged (homes shoppes, etc.,) 2,157. Early estimates for the rebuilding of the destroyed homes is in the region of £450,000. The figures arrived at for the replacement of schools and other services is in the region of £30,000.

PART II

RELIEF MEASURES:

18. The Government reacted with despatch and instituted early relief measures by sending in medical teams and supplies by helicopters to the area as soon as word of the disaster was officially received.
19. Local relief teams were immediately formed to assist in rescue work and in getting the building of shelters, the provision of food and medical supplies and the distribution of clothing, blankets, etc., underway. The Toro Committee was in charge of these operations.
20. The Uganda Red Cross, the St. Johns Ambulance, and Catholic Relief Services and Boy Scouts were early on the scene and assisted the local committee in bringing relief to the sufferers.
21. Teams from the National Uganda Youth Association under the supervision of C.D.O's performed prodigiously in the carrying out of rescue and salvage operations, demolishing of unsafe buildings and in the setting up of tents and temporary shelters and dispensaries for the housing of inhabitants made homeless by the earthquake and for the treatment of the sick and injured.
22. Public response was quick and effective. The Uganda Argus, one of the two daily newspapers, set up an earthquake relief fund and donations immediately poured in. The Toro Relief Fund was set up by the Ministry of Planning and Community Development and donations were sent in by several countries and international organizations. Local organizations and individuals collected funds, food, medical supplies, shoes and clothing for the sufferers.

CENTRAL COMMITTEE:

23. As the funds swelled and building materials and other supplies intended for the earthquake sufferers grew, it was found necessary to centralize all assistance in one body and co-ordinate all efforts intended for the earthquake sufferers. Thus a Central Relief Services Committee was set up in Kampala by the Ministry of Planning and Community Development.
24. This is the main agency for handling all matters connected with the earthquake. In the affected area the Toro Committee took local action and worked in close cooperation with the Central Committee in Kampala.

Local requests for assistance are sent to the Central Committee by the Toro Committee for screening and action. Relief centres were set up by the Toro Committee at Bukwaya, Akitenja, Bundibugyo, Busaru, Bubandi and Bumadu.

COMMENTS:

25. The present earthquake has brought home quite forcibly to all persons concerned, in one way or another, with the disaster areas, the need for ensuring, certainly in the construction of the buildings and in their maintenance, that future tremors of the same or greater intensity, will result in far less destruction and loss of life.

26. Since it appears that the area will be constantly subject to these earth tremors and in varying degrees of intensity, in order to limit the level of ~~destruction~~ likely to be suffered by the community in any future disaster, the authorities might wish to delay the starting of the permanent reconstruction programme until arrangements are made for the introduction of new and improved methods in the construction of public and residential buildings which will render them less liable to damage by earthquake.

27. The carrying out of such a plan, however, is much easier said than done since there are several problems to be overcome including the desire of the sufferers to get under permanent shelter with as little delay as possible, and the likely resistance to new methods that might conflict with traditional ones acquired over a period of generations.

28. First: It is obvious that in so far as public buildings in the towns are concerned, there is need for legislation to ensure that certain minimum standards of construction are adhered to in the putting up of those buildings. Schools, Churches, Shops, Stores and Community Centres in which large numbers of people are likely to be at a given time, should meet the requirements laid down by the authorities and these should be rigidly enforced:

29. Second: What applies to public buildings is only in a lesser degree equally true of private dwellings. It is not easy, however, to enforce the best building standards in these small dwellings by legislation, scattered as they are and built in almost every case by self help. What is required is education rather than legislation, so that self help builders can secure

the information and take steps to introduce these required features when constructing their houses. Assuming the continued use of traditional materials therefore, new and more effective methods of putting these together to satisfactorily withstand the effects of earth tremors must be devised and adopted.

30. People, however, are never ready to change methods and skills developed over the years for new ones unless they are first satisfied that it will be advantageous to do so. Further, it is not easy to effect change where a fatalist attitude is adopted by members of the population as in the present case, where in a good many instances the disaster is not considered a natural one but is said to be the result of the effect of the crowning of a new Omukama. Earth tremors also occurred during the coronation of the last Omukama some thirty odd years ago.

31. The situation is one which calls for a complete change of attitude and outlook on the part of the community and understanding and acceptance of the real causes of the disaster.

32. This problem, is the type that can best be treated by a well organized community development programmes geared to pointing to new horizons of betterment for the people and generating the type of change in their thinking and outlook that can result in significant changes in their behaviour patterns and living habits.

33. Fortunately the Ministry of Planning and Community Development is in possession of the type of trained personnel who can, with a measure of assistance, carry out a programme among these rural dwellers that should result in effecting the required change. Working along with the community development officers in the area should be a low cost housing technician, skilled in the use of traditional materials and having a knowledge of the type of construction required in earthquake affected areas. He should possess a knowledge of aided self help methods and techniques as applied to housing and be prepared to train groups of people in the new type of construction having studied the situation in the area for some months. He should be familiar with the various methods for treating bush poles and other building materials in order to render them impervious to the attacks of termites. At an early stage he should mount the type of programme aimed at winning the confidence of the people, so that he should have little difficulty in causing them to adopt the methods to be introduced.

34. As part of the practical training to be undertaken he should build with their assistance a few demonstration units of suitably treated materials in strategic areas selected for the purpose by the authorities.

35. Thus they would learn by doing the new methods to be applied when they are undertaking construction on their own. If as part of his equipment the officer is provided with a small workshop for turning out components such as doors, windows, roof trusses, etc., this would go a long way in improving the standards of the housing themselves as well as introducing some well needed skills in the area.

36. In view of the urgency of the situation it may well be that the most effective approach would be for the government to secure immediately for a short period the services of a specialist who would help in planning the reconstruction programme and thereafter make arrangements for the follow-up of his efforts by a qualified person capable of spending a longer period and undertaking the training of personnel and such other activities as may be required.

EMERGENCY RELIEF COMMITTEE:

37. Immediately following on the earthquake ad hoc relief efforts were undertaken by individual, church and other groups in the stricken areas. Following on a visit to the area on March 23 by the Permanent Secretary of the Ministry of Planning and Community Development more formal arrangements were made for the administration of earthquake relief measures.

38. In Fort Portal, the Toro Earthquake Committee was set up under the chairmanship of the District Commissioner and in Bwamba County a sub-committee of the Toro Committee was formed to administer relief in that area.

39. On March 26 a Central Relief Service Committee was set up in Kampala under the chairmanship of the Permanent Secretary of the Ministry of Planning and Community Development with the Senior Youth Organiser of the Ministry as Secretary and the Chief Executive Officer of the National Housing Corporation as Treasurer. (A list of the names of other Committee Members is attached - Appendix 'A').

40. The functions of the Central Committee were:

- a) to administer the Toro Earthquake Relief Fund set up in the Ministry of Planning and Community Development
- b) to co-ordinate all local and foreign assistance to the fund and to ensure that donations and contributions received were properly directed and accounted for, and
- c) to work in close collaboration with the Toro Committee which would assess the actual needs of the earthquake victims on the spot.

41. The Central Committee would also advise the Minister of Planning and Community Development on matters relating to the earthquake relief programme and make arrangements for purchasing equipment and materials to aid the earthquake victims. The Committee would make plans for raising additional funds and where necessary seek the assistance of Government for the meeting of the more expensive items of transport such as the use of helicopters by the Ministry of Health in carrying out its plans in connection with earthquake relief. The Committee would prepare and publish progress reports on its operations from time to time.

42. The Toro Committee, which was the operational one for the stricken area, worked in close collaboration with the Central Committee in Kampala. This Committee co-ordinated the efforts of voluntary organisations, individuals, Government Departments and the National Uganda Youth Association in the area.

43. Working in Bwamba County was a sub-committee of the Toro Committee. The sub-committee looked after the distribution of food, equipment, blankets, etc., and arranged for the work of the Youth Groups in the salvaging of materials, erection of temporary shelters and generally undertook and gave assistance in whatever relief work appeared necessary.

44. Altogether a splendid operational job was and is being done by these committees. Undoubtedly their efforts will improve as time advances. Here and there a few minor problems of administration arose and the element of personalty conflicts were not unknown. However all these were satisfactorily settled. The major task of securing materials such as building poles for erecting shelters and the putting up of temporary schools,

dispensaries and other communal buildings is still being actively pursued.

FUTURE PLANS:

45. One of the many useful suggestions made by the Central Relief Committee concerned the need for setting up a Permanent Relief Committee to deal with emergency situations and national disasters.

46. The earthquake, often considered as nature's worst disaster, necessitates the use of special equipment which must be strategically located so that they can be rushed at a moments notice to the disaster area.

47. The use of up-to-date equipment such as the geophone will permit rescue workers to locate persons buried under the debris of collapsed buildings, while the early rendering of first-aid as well as the use of megaphones to warn persons of dangerous situations in the area will help to ensure that the loss of life is kept to a minimum.

48. The idea of a Permanent Emergency Committee is a sound one and Government might wish to give further study to and take early action in this matter, particularly as it is known that sections of the country lie in earthquake prone areas. Thus provision could be made in advance for services to be provided during times of disaster in a planned and concentrated way, waste and duplication avoided and the whole exercise carried out with maximum efficiency and despatch.

RECOMMENDATIONS:

49. In the light of the foregoing report which points out the urgency of the situation, the Government of Uganda should immediately request from the United Nations, the services of a Low Cost Housing Construction Specialist to be attached to the Ministry of Housing and Labour and to liaise with the Ministry of Community Development and Planning for the purpose of advising on the minimum building regulations for earthquake areas and to indicate the training for Government personnel in the earthquake devastated area in new and effective methods of erecting earthquake resistant buildings. (Vide attached job description - Appendix 'B').

50. The expert on the completion of his tour of duty should make arrangements for the proper follow up of the programme initiated by himself.

51. The Government may also wish to consider sending two of its technical officers to the Earthquake Research Institute run by UNESCO in Tokyo, Japan. This matter should be discussed and finalized with the expert.

APPENDIX 'A'

Members of Central Relief Services Committee.

Mr. V. Ovonji, Permanent Secretary, Ministry of Planning and Community Development (Chairman)

Mr. J.N. Kawuki, Ministry of Planning and Community Development

Mr. M.A. Rubanga, ditto

Mr. L.S. Ogwal, ditto (Secretary)

Mr. M.L.S.B. Rukuba - Forestry Department, Entebbe.

Fr. T. Agostoni - Uganda Catholic Secretariat, Box 2880, Kampala.

Mr. John E. Compton - Church of Uganda, Box 14123, Kampala.

Mr. B.M. Kalali - National Housing Corporation, Box 659, Kampala.

Major S. Bywaters - Uganda Salvation Army, Box 1186, Kampala.

Mrs. J.D. Shallow - Oxfam, Box 1528, Kampala.

Mr. G.P. Waddell - Uganda Police, Box 355, Kampala.

Mr. N.D. Durand - Ministry of Health, Box 8, Entebbe.

Mr. J.M. Sheja - Uganda Technical College, Box 181, Kampala.

Mr. E.M. Kigundu - National Council of Social Services for Uganda, Box 3181, Kampala.

Mr. L.S. Oyaka - Ministry of Foreign Affairs, Box 122, Entebbe.

Mr. G.G.H. Gomm - UNESCO, Box 263, Kampala.

Miss M. I. Denham - Save the Children Fund, Box 3448, Kampala.

Mrs. I. Kigundu - Uganda Red Cross, Kampala.

Mr. J.S. Musoke - Agriculture and Co-operatives, Box 102, Entebbe.

Mr. I.K.K. Balaba - Ministry of Regional Administrations, Kampala.

Mr. A.T. Sabiti - Ministry of Education, Kampala.

Mr. C.W.H. Wamalwa - Ministry of Internal Affairs, Kampala.

APPENDIX 'B'

Request from the Government of Uganda

JOB DESCRIPTION

Post Title: Adviser on Housing Construction for earthquake affected areas.

Duration: Two to three months.

Date required: In view of the urgency of the situation brought about by the recent earthquake it is requested that this job description be treated with the utmost urgency and nominations be forwarded at the earliest opportunity and in any case before June 1, 1966.

Duty Station: Kampala.

Duties: The expert will be expected to:

- assist the Government of Uganda in the reconstruction programme of the recently devastated earthquake areas in Toro Kingdom, Uganda.
- confer with local authorities in establishing the basis of future building codes for earthquake construction.
- advise and settle the basic principles for earthquake construction and develop a manual outlining in simple language and graphically illustrating the principles of housing construction in earthquake areas.
- make recommendations for the proper following up of his initial mission.

Qualification: University degree in Structural Engineering.
Experience of construction in earthquake affected areas.

Language: English.

Background
information:

Uganda has recently suffered from a devastating earthquake that has caused considerable loss of life and damage to buildings and people, and particularly so in Bwamba County, Kingdom of Toro. Post-disaster investigations have shown that poorly built and badly designed structures have also contributed to the extent of the damage.

The families in the area will need information on the introduction of earthquake resistant methods in the construction of their homes which for the most part are built on a self-help or mutual assistance basis.

Local construction materials will have to be treated to make them impervious to the attack of termites and the design of the units upgraded to make provision for proper lighting and ventilation.