UNESCO Human Settlements Managers Training Programme

The Management of Human Settlements in Hot Dry Climates

Final report

On course held in Sahara Hotel, Khartoum, Sudan, Feb. 19th-29th 1984 (using the Rotational Group Systems Method)

Sponsored by UNESCO in collaboration with UNCHS (Nairobi), ALECSO (Tunis) and the University of Khartoum, Sudan

Dr. Martin Wynn March 1984

Contents

Foreward

The Khartoum course on 'The Management of Human Settlements in Hot Dry Climates' brought together Sudanese public officials working in a wide range of ministerial posts in different regions of the country. Organised by the University of Khartoum with the support of UNESCO, UNCHS and ALECSO, the course took the form of a seminar/workshop in which participants were given the opportunity to present their own case study experiences and learn from each other in intensive group discussion sessions.

The seminar/workshop was structured around three major aspects of human settlement management - physical /environmental, socio/economic and financial/administrative - in the particular context of hot dry climates, and with special reference to the Sudan. The outcome has been a set of recommendations for action which highlight the need for transectoral co-ordination and integrated action in the effective management of human settlement problems, many of which require urgent attention and appropriate treatment.

This course - the first of such ilk to be held in the Sudan – is seen as a small step in enhancing the understanding of the inter related nature of the settlement issues with which the participants deal on a day-to-day basis. It is hoped that their subsequentactions, combined with follow-up courses, will help diffuse improved performance throughout the administrative-technical network that affects the wide range of problems associated with human settlement management in hot dry climates.

1. Introduction

This document constitutes the Final Report on the course held in the Sahara Hotel, Khartoum, on the 'Management of Human Settlements in Hot Dry Climates' from the 19th-29th February 1984. The report contains two major sections. One of these (Section 2) concerns the recommendations for action produced during the seminar, whilst the other (Section 3) examines the course planning process and related pedagogical aspects.

It is perhaps worth briefly noting here the wide ranging nature of the recommendations which encompass a great many settlement issues and problems with particular reference to the Sudan. It is clear that there is a great opportunity in the Sudan for shaping future growth and change in a developing country where the economy is still largely based on primary agricultural production. Nevertheless, the rapid rural-urban migration of the past two decades, has resulted in the characteristic employment, housing and service deficits in the main urban centres above all, Khartoum).

The course recommendations highlight the fact that structural issues - administrative, economic and political - lie at the heart of many of the day-to-day conflicts and problems with which human settlement managers have to deal, and the reform of existing institutions and policies and creation of new structures and procedures must clearly precede any long-term resolution of many of these problems. Such change is unlikely to be achieved overnight, and it is hoped this

seminar/workshop may have made some small contribution by enabling course participants to view human settlement management issues within macro and micro contexts and to appreciate the wide range of disciplines and perspectives that impinge on their effective treatment and resolution.

2. Summary of recommendations

The following set of recommendations for the Management of Human Settlements in Hot Dry Climates were generated by participants at the Khartoum course, working through the Rotational Group Systems Method. They refer specially to the Sudan, although many have a wider applicability.

2.1.   Physical and environmental aspects

General Introduction

Hot dry climates present particular problems and constraints for human settlement management. A harsh natural environment results from very hot summers (monthly means of 25°C and above), hot winters (15°C and above), high diurnal range of temperatures and low precipitation rates (typically less than 250mms. a year). The sporadic nature of rainfall, combined with high evaporation rates, produces particular problems for the supply of water for domestic, agricultural and industrial purposes. Vegetation cover is generally sparse, and extreme temperatures, high radiation rates, low humidity, hot winds, (The Samoum), sandstorms and the directness of the sun's rays, pose special problems for man in the provision of his habitat and basic needs. Periodic droughts poor soils and high incidence of disease are additional problems that man faces in such climatic areas; and the fragility of natural ecosystems requires their careful exploitation and management.

Population is generally thinly distributed, with access to water being a key factor in the historical evolution of settlement patterns. In the Sudan, the bulk of the population still live in rural areas, despite rapid rural-urban migration over the past two decades, in the main to the country's capital, Khartoum. This rapid influx of population poses acute problems as regards the provision of housing and employment, and the integration of immigrants into urban life.

The Conservation and Management of Natural Resources

l. Water

The national water policy to manage the supply and conservation of the FOUR main water sources in the Sudan i.e. rivers, ground water, rain and sea should address the following.

- Water resources maps need to be prepared, using satellite technology, for areas of highest need, particularly the Western regions.
- Settlement strategy and agricultural policies should take into account water resources.
- Efficient techniques need to be developed for managing the consumption of water, including the following:
  - Domestic byelaws and regulations should be introduced to control the non-essential use of treated water.
  - Policies should be developed for controlling the use of water by industry.
  - More efficient techniques need to be developed for irrigation.
- Conservation policies need to be developed to control pollution caused by -
  - Industrial effluent
  - Spread of water-borne diseases
  - Contamination of water by pesticides and fertilizers etc.
  - Pollution of rivers by untreated sewage.

2. Rural land

- Strict standards need to be developed and enforced to present the consumption of good agricultural land for development.
- Policies   need to be developed to control tree-cutting and to develop programmes for reforestation.
- Traditional patterns of land ownership in rural areas need to be legalized.

3. Desertification and desert creep are problems requiring urgent attention. (The desert is advancing at 7 kilometres a year in Darfour). Measures should include:

- Formalizing grazing rights through the creation of grazing reserves.
- Reconsideration of agricultural policies with regards to mechanized farms, in West and Central Sudan.
- Enforcement of forest conservation laws and planting of forest belts.
- Instigation of research into new ways of combatting desert encroachment, possibly with the help of international agencies (e.g. FAO, UNDP, etc).

4. Energy

- Efficient physical planning and building methods can help in the conservation of energy and minimize associated service infrastructure.
- The feasibility of improving the efficiency of existing dams, and constructing new ones, needs to be investigated, to harness better the country's hydro-electric power resources.
- At the same time, alternative technologies for energy need to be explored (solar, wind, biogas), to supplement existing sources of energy.

The Development of Settlement Strategies

l. There is a need to decentralize economic activity, services and infrastructure within the country as a whole, and within urban centres themselves. Regional centres should be developed to act as counter-magnets to arrest the current trends of rural-urban migration. This should involve full development of all resources (minerals, energy, agriculture, local culture).
2. In rural areas, there is a need for a clearly defined land policy encompassing land tenure, ownership, classification and division, to provide a firm legal framework within which development can take place.
3. In urban areas greater attention needs to be paid to the problems of urban design to ensure optimum micro-climatic conditions, including the revision of:

- Planning standards
- Building standards
- Health standards, with particular regard to refuse disposal and water supply systems.

In addition, rules and regulations concerning green space provision need to be more vigorously implemented. Council initiatives in the field of green space provision could include: provision of grants and incentives, encouragement of community forests and increasing of general environmental awareness. Regulations concerning the control of animals need enforcing in urban areas.
4. Nomads require special and separate attention to their needs. A supervisory pastoral nomadic agency needs to be established within the central administration to formulate guidelines for the management of nomads in the fields of education, grazing rights etc.

2.2. Social economic aspects (with special reference to Housing, Services, Health and Welfare Provision)

The Main Target Group

Housing policies need to be developed with particular attention to the main target group.

l. The main target group, comprising 80% of the Sudanese urban population, can be broadly categorized as a low-income group.
2. 'Minimum standard' housing for rent/purchase is beyond the means of this group.
3. This group has no access to conventional formal credit systems.
4. Most of this group (i.e. more than 80% of the urban population) are either unemployed, underemployed and/or engaged in the informal sector.

The Current Situation of Housing and Services.

1. Formal housing provision provided by the State for low income groups in the Sudan consists of:

- Predominantly site and services schemes
- Site only schemes
- Some project housing (new houses, typically 1-3 rooms, full services) for special groups (e.g. Sudan railways

employees).
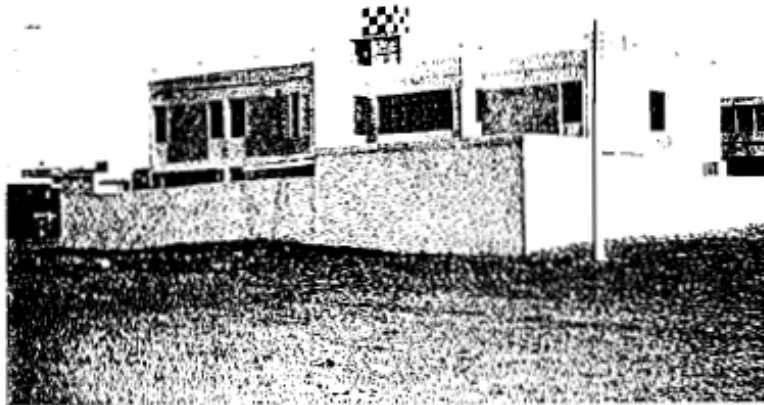
First-Class Housing, Safia, Khartoum

The Informal Sector - in which over 80% of Sudan's urban population are engaged
(Photos: M. Wynn)

2. Informal housing provision – spontaneous squatter development - in some cities exceeds 50% of housing stock.
3. Site and services schemes to be implemented in the future will hopefully be adequate to meet the housing demand for low-income groups, and facilitate the disappearance of squatter settlements.
4. Service provision in low-income housing types suffer the following defects:

- Water comes largely from the network (tapped) but in some towns (e.g. Malakal) water is still provided by standpipes and boreholes, with consequent health hazards (contamination, disease).
- Electricity services are not available in most of the low-income areas in urban centres; priority in providing electricity networks is always given to high-income housing areas.
- Overcrowding.
- The lack of adequate means for human waste disposal constitutes a major health hazard.
- Surface-water drainage is generally poor and needs upgrading and improvement.
- Internal roads and pedestrian access ways are generally poorly constructed.
- Recreational facilities are minimal.
- Location is typically peripheral to the town/city centre and distant from centres of employment. Bus and train services are poor or non-existent.

Squatter settlement in Zagalona, Khartoum
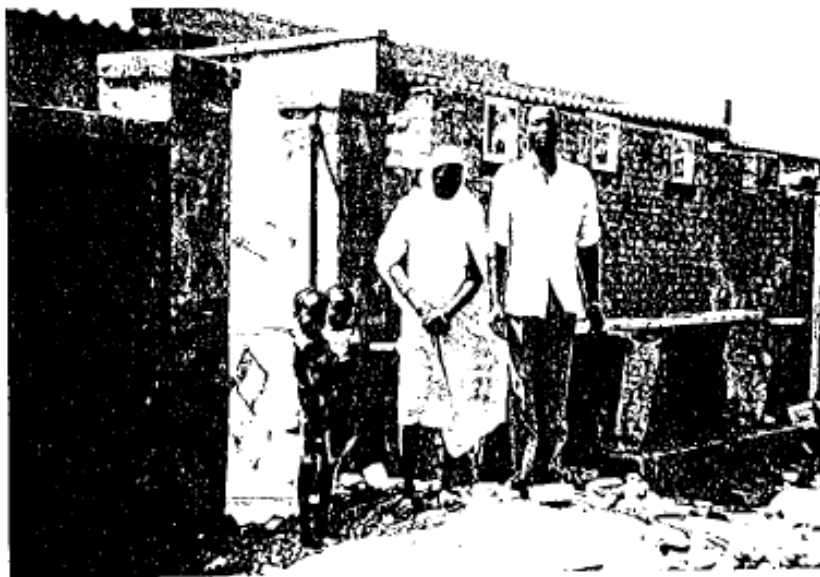
Experimental housing, built by the Ministry of Construction to rehouse squatter settlers, Zagalona, Khartoum
(Photos: M. Wynn)

Health and Welfare Aspects

1. Overcrowding in low-income housing, improper ventilation and low hygiene standards in general is a major cause of certain diseases (e.g. meningitis, T.B.).
2. Hospitals, medical centres and maternity and welfare centres:

- Inadequate in number.
- Distance means cannot be reached in times or urgent need.
- Lack of finance and poor administration.

3. Inadequate garbage collection and disposal services exacerbate the dangers of contracting typhoid, gastro-intestinal diseases etc.

Recommendations for Action

Existing Built-up Area

1. Surveys of service deficits, on an area-by-area basis, should be carried out in the main urban centres. (i.e. deficits in water, electricity, sanitation, roads, sewage, recreation, education and health). Such surveys can be used as the basis for programmes of action, to provide services in housing areas.
2. Such service programmes demand effective co-ordination between planners and the agencies responsible for service provision. Communication and consultation with affected resident groups will also be necessary if such programmes are to be successfully planned and implemented.

Future Growth

1. Sudan's main urban centres have experienced a rapid horizontal expansion over the past decade. This has produced haphazard mixes of land use, irrational and uneconomic plot sizes, inequitable distribution of housing types and massive service deficits.
2. Forward planning needs to be introduced which will ensure more efficient use of resources. Particular attention needs to be paid to employment and to encourage a wide range of employment opportunities including the protection of the informal sector.
3. As regards plot size in site and service schemes, there is a need to scientifically establish minimum space requirements for different family sizes. Such standards should be used as the basis for future land division and allocation.
4. In future residential development, all basic services should be provided prior to land disposal and home construction. This demands co-ordination between planning and implementation agencies, and effective planning at local and city-wide levels. The provision of welfare, education and recreational service infrastructure should be programmed and budgeted for in local level (and higher) plans. This again will require a level of co-ordination and forward-planning currently lacking.
5. Vacant space in city centres set aside for recreational, educational, health and cultural service provision should be conserved and used for such purposes. This should not be sold off to private developers for other purposes.
6. Future city growth should combine well-planned low rise housing solutions with limited multi-storey development. Such schemes should be carefully integrated and co-ordinated with macro-service provision.
7. More research on feasibility studies on multi-storey building is recommended as an alternative to horizontal expansion.
8. There is a need to recognise and accept the existing squatters and take resolute action to stop any future growth in their settlements by encouraging growth in other centres.
9. Incentives need to be given to encourage the development of new houses and the upgrading of the existing houses including the following:

   - By extending the period of grace for the completion of the house.
   - Exemption from payment of enhancement value, betterment value, rates etc.
   - Building and planning standards need to be related to encourage house building.

10. Education provision should be considered on. a broader basis with educational centres providing a range of services including Primary, Adult and Vocational Training.
11. Increase in employment opportunity for low-income groups is critical in increasing spending power and widening access to better housing. Due consideration should be given to employment location and resulting journey to work patterns.

2.3. **Administrative-financial aspects**

Introduction

This component of management of human settlements poses a number of shortcomings and deficiencies stemming from meagre national and regional financial resources and inefficient utilization of the available and potential resources. This includes a wide range of fields from collection of local taxes and revenues to attraction of foreign investment and aid. The management of the financial problem should bring into consideration current weaknesses and the means to counter them. In many cases, at national and regional levels, there is a poor performance which could perhaps be visualised in

a number of de facto situations:

- The powers of decision-taking are mostly still centralised or based on the regions.
- There are frequent changes that take place from time to time in the administrative structure which entails changing policies.
- There is a lack of co-ordination within and between the various government bodies.
- Administrative and financial policies and practises are mostly lacking in their accountability to the public.
- There is an absence of co-ordinated planning and policies in educational training programmes and a need to assess the country's needs of manpower and employment.
- The present governmental salary system does not give real consideration to the actual cost of living and the actual rate of inflation which result in the constant migration of trained and qualified personnel to more attractive employment offers in the private sector and outside the Sudan. Poor salaries also provide the kernel and potential for corruption.
- Budgets allocated to basic services and education and health provision are often beneath the needs in these fields.
- Interference by influential groups and individuals into the administration creates a number of very serious problems which obstruct the development process.
- Budget transfers are always delayed and cut because of poor cash liquidity.

Recommendations

Administration

l. The administrative system needs to be reviewed to separate the political and administrative functions and to make it more accountable to the public.
2. There should be a greater devolution of power to District Councils and the lower levels of administration.
3. Greater co-operation should be encouraged between different agencies by developing policies on an area rather than sectoral basis.
4. Man-power assessment studies should be carried out and training programmes developed to relate educational provision to man-power needs.
5. Emphasis should be placed on the development of local training programmes whenever possible.

Finance

l. A review of the tax assessment base should be undertaken to increase revenue in line with inflation.
2. The tax collection system should be upgraded and greater efforts made to eliminate tax avoidance.
3. Formulae should be established to link local government income to central government financial support.
4. Consideration should be given to vesting land interests in the local level of government.
5. Separate revenue accounts should be kept to relate income and expenditure.
6. Expenditure by government should be subjected to more rigorous cost-effectiveness reviews.
7. Expenditure priorities need to be clearly established with their related budgets.

Planning

l. The forward planning function needs to be strengthened through the creation of properly staffed and adequately equipped planning units at the regional and lower levels of government.
2. Greater emphasis needs to be given to the separation of strategic from tactical issues.
3. All planning proposals should be properly costed and budgeted for as appropriate.
4. Consideration needs to be given to the establishment of data banks using modern computer technology.
5. Planning institutions with professional technical and training functions should be established at the central level, with the assistance of the relevant international agencies.
6. The wealth generating aspects of planning should be given greater consideration, not only with regard to the more efficient use of resources, but also the promotion of economic growth,

Implementation

1. New agencies, such as co-operatives and building societies, should be promoted to assist in the implementation of development.
2. Greater consideration should be given to joint partnerships between the public and private sectors, in implementing development.

3. Effective monitoring systems should be established to ensure plans are being implemented effectively and the results fed back into the planning system.
4. Project implementation and budgeting allocations need to be fully integrated.
5. More effective methods of controlling development, particularly in urban areas, should be rapidly implemented.
6. Greater steps should be taken to control land speculation.

3. **Course Structure, Organisation and Review**

In accordance with recommendations contained in the revised 'Handbook for the Design and Organisation of Training Courses'[1] this section contains sub-sections on the Problem Set, Training Goals and Learning Objectives, Technical /Thematic Content and Training Methods and Review Assessment.

3.1. Problem Set Factors

Course title: The Management of Human Settlements in Hot Dry Climates.

Participants: 16, comprising 13 Sudanese (Ministerial Officials in the main), Professor Ian Haywood (University of Khartoum) and the UNESCO and UNCHS representatives.

Dates-: 19th – 29th February (10 full working days, plus one day optional field excursion).

Location: Sahara Hotel, Khartoum City Centre.

Accommodation: 6 participants stayed in the Sahara Hotel. The remainder stayed at their own homes or those of their families. (The 'extended family' system in the Sudan means that most people have relatives with a house in the capital).

Daily regime: Two sessions, the first being 9.a.m. to 2.p.m. the second 6.p.m. to 9.p.m.

Finance: UNESCO provided 11,000 U.S. dollars, ALECSO provided 20,000 U.S. dollars and UNCHS provided 5,000 U.S. dollars. This was more than was finally required because of the non-arrival of overseas participants (thus saving travel and accommodation expenses).

Trainers: Dr. M. Wynn (UNESCO consultant) planned and ran the course in conjunction with Professor Ian Haywood and with the support of Dr. Mohamed Ali, both of the University of Khartoum. Professor Nicholas You, UNCHS training officer, was present for the first four days of the course and provided valuable inputs during this period.

Local contacts: The Sudanese Ministry of Education, acting through the National Commission for Science, Education and Culture, acted as official hosts on the opening and closing days and were invaluable in providing back-up/organisational services throughout the seminar. The Minister of Education officially opened and closed the course. In addition, locally based experienced administrators were contacted to provide the three key note addresses given during the course.

Documentation/back-up material: A large number of published articles (some 25 in all) concerning different aspects of human settlement management in hot dry climates, were provided by the UNESCO consultant, and copies made available to participants. The UNCHS representative brought along a range of UNCHS publications; and maps and charts of the Sudan and Khartoum were provided by the University of Khartoum. Introduction, key note address and case study papers were provided by the organisers, the key speakers and the participants respectively.

Language: The course was held in English, in which all participants were proficient.

Technical back-up: A typist, two back-up technicians and photocopier were permanently on hand. This greatly helped with the smooth running of the Rotational Group Systems method. Overheads and flow-pens were provided by the UNESCO consultant. An overhead projector and flip charts were made available by the University of Khartoum.

3.2. Training Goals and Learning Objectives

The generalised training goals for the course may be summarised as follows:

1. To provide a structure for the exchange of experience and perspectives on problems and issues concerning the management of settlements in hot dry climates.
2. To develop an awareness of the transectoral and interdisciplinary nature of human settlement problems, and the need for concerted integrated action in treating these problems.
3. To work towards a final report outlining major issues and recommendations for action.

[1]Dr. M. Wynn Handbook for Design and Organisation of Training Courses, UNESCO, Division of Human Settlements and Socio-Cultural Environments Paris, 1984.

In the 'Handbook for the Design and Organisation of Training Courses' referred to above, three major goals for such courses are identified, and of these the Khartoum course mainly concerned Goal A - Learning to Understand and Manage the Development Process, with Goal B - Learning to Understand Yourself and Others - being of secondary importance.

Similarly, learning objectives in the main concerned those relating to Goals A & B in the Handbook. Three broad aspects of human settlement management in hot dry climates were examined throughout the seminar in intensive group discussion sessions, and through case study papers presented by course members. These three aspects - Physical /Environmental, Social/Economic, Financial/Administrative - provided a rough framework within which participants could exchange experience and develop their arguments. In particular it was hoped that such a structure would enable participants to:

- Identify critical issues and problems (Al)
- Identify relationships between problems and issues (A2)
- Formulate alternative courses of action (A3)
- Evaluate and appraise potential impacts of different courses of action (A4)
- Heighten awareness of others' perceptions of their role (B2)
- Broaden their understanding of others' strengths and weaknesses (B3).
- Improve communication skills (B6) with particular reference to intensive group discussion and short report writing and editing.

Figures in brackets refer to learning objective numbers given in the Handbook.

3.3. Technical/Thematic Content and Training Methods

The Khartoum course was an open-ended seminar/workshop pitched at a fairly high level of generality, encompassing a wide range of issues and problems relating to the management of human settlements in hot dry climates, with particular reference to the Sudan. As such, there was no strictly defined Topic List drawn up prior to the course. Rather, the course was intended to revolve around two main elements:

(l) Case Study presentations by course members. These were programmed for the evening sessions and gave course members the opportunity to examine in detail the work experiences of individuals. These modules consisted of short talks, followed by question and answer sessions and discussion. The presentations were as follows:

Tuesday 21st Feb:
Site and Service Projects in Atbara
Northern Region, Sudan by El Hussein Elmahdi El Hussein, Ministry of Housing and Public Utilities, Atbara.
Wednesday 22nd Feb:
Nomads in Kordofan by El Hadi Mohamed el Mowag, Ministry of Public Services, El Obeid, Kordofan Region.
Thursday Feb. 23rd:
Rural Water Supply and Service Provision in the Upper Nile by Peter Galyath Saverio, Ministry of Agriculture Co-operatives and Natural Resources, Upper Nile Region, Malakal.
Saturday Feb.25th:
Planning Khartoum Province by Mohamed Ahmed Yousif and Dr. Mustafa Abu Reesh, Ministry of Construction, Khartoum.
Monday Feb. 27th:
Tentative Aspects of Planning Education Services for Equatoria Region by Sayed Micah Losowa Modh. Ministry for Services, Equatoria Region, Juba.
Thursday Feb. 28th:
Pilot Project in the East Gezira Area for Family and Community Development by Mohamed Basheir Mubarak, Ministry of Health and Social Welfare, Medani Central Region.

These case study papers were generally well received and discussion and questioning produced insights and exchanges between course members that enriched the subsequent discussion of key issues and relationships in the Rotational group systems sessions. The general quality of these papers was very high, and it is hoped several will be published in appropriate journals soon.

(2) Rotational Group Systems, featuring intensive group discussion, panel presentations and question and answer sessions. These modules were structured around the following themes and sub-themes: (Fig. 3.l)

A.   Physical and Environmental Aspect

- Natural environment and resources
- Man-made environment

B.   Socio-Economic Aspects

- Socio economic activities and characteristics of target groups.
- Health, welfare and education provision

C.   Financial-Administrative Aspects

- Administrative structure and finance
- Planning and implementation strategies, tools and agencies

The timetable (Figure 3.2.) shows when these issues were discussed and Table 3.1. gives participant role numbers. The Rotational Group Systems Method involves a three fold treatment of issues.[1]

First: to establish problems, issues, and factual data concerning the issue.
Second: to put together recommendations, proposals and summary statements concerning the issue.
Third: to synthesize previous group reports and work towards a final group report.

Figure 3.1. Rotational Group Systems Method as used in The Khartoum Course

In addition, the following also featured in the course as more minor elements (in terms of time consumption).

- The opening address, including short speeches by Professor Osman Sid Ahmed, Minister of Education, Professor Ian Haywood, Dr. Martin Wynn and Professor Nicholas You.
- The Introductory Morning Session by Dr. Martin Wynn, UNESCO consultant, in which the general course structure and objectives were outlined and the mechanics of the Rotational Group Systems Method were explained.
- The Introductory Evening Session by Professor Nicholas You, UNCHS, on human settlement problems in developing countries with particular reference to project implementation.

[1] For further detail on the mechanics of the R.G.S. Method see M. Wynn 'Forest Management and Biomass Utilization' Interdisciplinary Training Programme for Human Settlement Managers, Report No.l, UNESCO, Paris, June 1983.

- The Field Trip (Friday 24th Feb), including site visits to: The Omdurman 'Souk' (market), site and service schemes and squatter areas in Zagalona (Khartoum) and first class housing in Safia (N. Khartoum).
- Key Speeches by local practitioners and officials to set the scene for the main working sessions. The key speakers were:
- Professor Abdel Rahman El Agib, Director of Scientific and Technical Research, National Council for Research (on Physical Environmental Aspects).
- Dr. Mansour Mohamed Mansour, Faculty of Medicine, Department of Community Medicine, University of Khartoum (Social-Economic Aspects).
- Mr. El Shiekh El Hag El Shiekh, Director of Decentralization Affairs, Khartoum Commissioners Office (Financial-Administrative Aspects).
- Dr. Hassabelrasoul Hussein Ahmed, Sudan Academy for Administrative Sciences (Financial Administrative Aspects).
- The Final Presentation of the recommendations for action, read out by course members to selected academics, officials, students etc. and in the presence of the Minister of Education.

These different elements fitted together as shown in the course timetable (Figure 3.2.) representing a slight variation on the timetable as originally planned (figure 3.3.).

ROLE NO.	NAME	AUTHORITY
A1	Dr. Mohamed Ali Awad Elkarion	Dept. of Community Medicine University of Khartoum
A2	Mohamed Ahmed Yousif	Ministry of Construction and Public Works, Khartoum
A3	Dr. Mustafa Aby Reesh	Ministry of Construction, Khartoum
A4	Abu Elgasim Yousif Idris	Sudanese National Commission for Education, Science and Culture, Khartoum
B1	Dr. Martin Wynn	UNESCO
B2	Mohamed Basheir Mubarak	Ministry of Health and Social Welfare Medani Central Region
B3	El Hadi Mohamed El Mowag	Ministry of Public Services, El Obeid, Kordofan Region
B4	El Hag Saad Alla Abdalla	Ministry of Finance and Economic Planning, Khartoum
C1	Prof. Ian Haywood	University of Khartoum
C2	Muawia Al Tigani	Ministry of Health, Khartoum
C3	Omer El Faroug Mohamed Nour	Ministry of Health, Khartoum
C4	Micah Losowa Mohamed	Ministry for Services, Equatoria Region, Juba
D1	Prof. Nicholas You	UNCHS
D2	Gamal Hassan Ibrahim	Housing Department, Khartoum Council.
D3	Elhussein Elmardi Elhussein	Ministry of Housing and Public Utilities, Atbara
D4	Peter Jalyath Saverio	Ministry of Agr. Co-operative and Natural Resources, Upper Nile Region, Malakal.

Table 3.1. Participant Role Numbers for the Rotational Group Systems Sessions

Figure 3.2. The Timetable of Sessions for the Khartoum Course

| February	19th	20th	21st	22nd	23rd	24th	25th	26th	27th	28th	29th
DAY	1	2	3	4	5	6	7	8	9	10	11
9 a.m.	Opening Address (Prof.Sid Ahmed) Prof.Haywood Dr. Wynn Prof. You).	Key Speech: Physical-Environmental Aspects (Prof.Abdel El Agib).	Socio-Economic Aspects Phase 1	Key Speech Social-Economic Aspects (Dr. Mansour)	Q & A	Field	Key Speech Financial Administrative Aspects (Mr. El Shiekh) (Dr. Ahmed))	RGS Panel	Socio-Economic Aspects Phase 2 RGS Panel Pres.	RGS Panel Presenta. Q & A	Final Presentation
10.30 a.m.											
10.45 a.m.	Introductory Session: Course Structure & Objectives (Dr.Wynn) RGS	Physical Environmental Aspects Phase 1	RGS	Panel Presentation	Case Study Presentation: 'Rural Water Supply and Service Prov. in the Upper Nile' (Mr. Saverio)	Trip	Financial Administration Aspects Phase I	Presentation Q & A	Q & A Financial Admin. Aspects Phase 2	Synthesis Session	
2.00 p.m.											
6.00 p.m.	Introductory Session: Problems on Human Settlement	Panel Presentation	Case Study Presentation 'Site and Services Project in Atbara'	Case Study Presentation 'Nomads in Korsofan'	FREE EVENING		Case Study Presentation 'Planning Khartoum'	Physical Environmental Aspects Phase 2 RGS	Case Study Presentation 'Tentative Aspects of Planning	Case Study Presentation 'Pilot Project in the East Gezira Area	CLOSE
7.30 p.m.											
7.45 p.m.	Management in Developing Countries (Prof.You).	Q & A	Northern Region (Mr. El Hussein)	(Mr. El Mowag)			Province (Mr.Yousif Dr.Abu Reesh)	Panel Presentat. Q & A	Education Services for Equatoria Region' (Mr.Losowa Mohd).	For Family & Community Development (Mr.Mubarak)	

Sessions using the Rotational Group Systems Method

Figure 3.2. The Timetable of Sessions for the Khartoum Course (Feb.19th - 29th, 1984)
(Compare with Figure 3.3. overleaf)

The Field Trip
Dr. Mohamed Yousif (left) makes a point to course members about the Ministry of Construction's experimental housing in Zagalona.
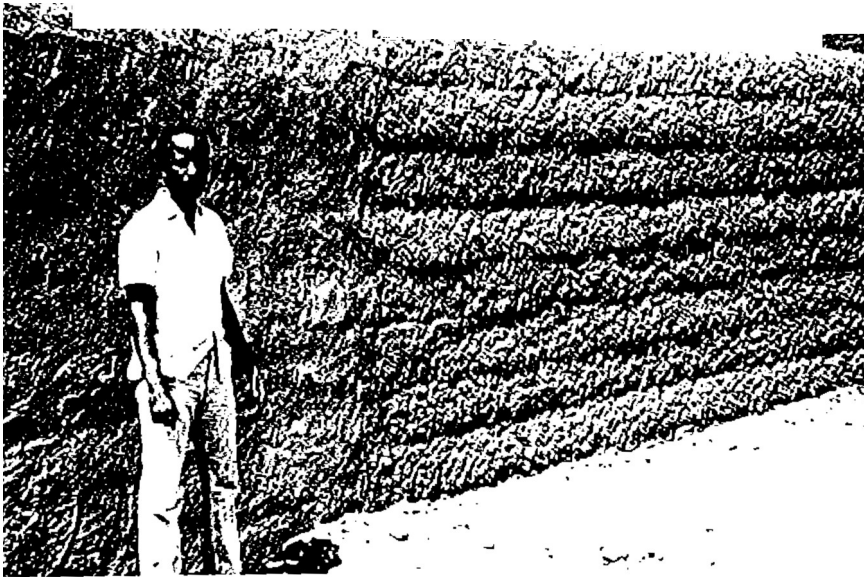
The Field Trip

Dr. Abu Reesh explaining the construction process for outer site walls in site and service schemes, Khartoum.

(Photos: M. Wynn)

February	19th	20th	21st	22nd	23rd	24th	25th	26th	27th	28th	29th
	1	2	3	4	5	6	7	8	9	10	11
9.00.A.M. – 10.30	Opening Session	Key Speech/ Key Issues Seminar	Economy Physical Aspects 2 (Phase I)	Key Speech/ Key Issues Seminar	Social-Cultural Welfare Aspects 2 (Phase I)		Key Speech/ Key Issues Seminar	Finance Planning & Administ. 2 (Phase I)	Synthesis Group Working: Economic-Physical Aspects	Synthesis Group Working: Finance Planning and Administration	Final Report Physical Aspects
10.45 – 12.15.P.M.	Theme Intro	Economic Physical Aspects I (Phase I)	Panel Pres. Discussion	Social Cultural/Welfare Aspects I (Phase I)	Panel Pres. Discussion		Finance Planning & Administ. I (Phase I)	Panel Pres. Discussion			Final Report Social Aspects
12.30.P.M. – 2.00.P.M.		Panel Pres. Discussion	Economic/Physical Aspects I (Phase 2)	Panel Pres. Discussion	Social Cultural/Welfare Aspects I (Phase 2)		Panel Pres. Discussion	Finance Planning & Administ. I (Phase 2)	Plenary Discussion	Plenary Discussion	Final Report Admin. Aspects
6.00.P.M. – 7.30.P.M.	Problems of Developing Countries	National Presentation	Panel Pres. Discussion Economic/Physical Aspects 2 (Phase 2)	National Presentation	Panel Pres. Discussion Social/Cultural Welfare Aspects 2 (Phase 2)		National Presentation	Panel Pres. Discussion Finance Planning & Administ. 2 (Phase 2)	Synthesis Group Working: Social-Cultural/Welfare Aspects.	Final Report Preparation and Review	Plenary Sessions
7.45.P.M. – 9.15.P.M.	Regional Problems		Panel Presentation Discussion		Panel Presentation Discussion			Panel Presentation Discussion	Plenary Discussion		Final Dinner
	INTRODUCTION	ECONOMIC-PHYSICAL ASPECTS OR URBAN MANAGEMENT		SOCIO-CULTURAL/WELFARE ASPECTS OF URBAN MANAGEMENT		FIELD TRIP	FINANCIAL PLANNING AND ADMINISTRATIVE ASPECTS OR URBAN MANAGEMENT		REVIEW SESSIONS		CONCLUSIONS

Sessions using the Rotational Group Systems Method
Themes and Sub-themes

Economic - Physical Aspects
1. The Economy of Human Settlements in Hot Dry Climates
2. The Built-up area in Hot Dry Climates

Socio-Cultural/Welfare Aspects
1. Demography and Socio-Cultural Influences
2. Health, Welfare and Education

Financial Planning & Administrative Aspects
1. Finance and Administration
2. The Planning and Management of Development

Figure.3.3. The planned time table for the Khartoum (Sudan) Course

3.4.   Review and Assessment

It seems reasonable to claim that the Khartoum course was a success. The difficulties in getting the course underway were considerable, with many key questions remaining unresolved literally up until the last minute. Yet the general feedback from course participants was extremely positive, and the amount achieved during the eleven day period, in

terms of self and mutual learning, was undoubtedly high. The 'recommendations for action' produced by course participants also constitute a useful discussion document for those concerned with policy making at the national, regional and settlement levels. What lessons can be learned from this experience that might be of use for those planning similar courses in the future?

[Missing page (32)]

into the course programme to enable suitable adaptation to new circumstances. Indeed, the fact that only Sudanese attended the course (UNESCO & UNCHS consultants excluded) meant that the focus of the course could be exclusively on the Sudan, even if literature and examples from other countries were cited from time to time (See Appendix 2).

As regards the course member selection process, it might well be that overseas candidates could more effectively be selected using UNESCO or UNCHS contact lists, rather than relying upon a national body (in this case the National Commission for Education, Science and Culture) to undertake this task.

The second major problem area was that of finance. Although UNESCO finance was secured at a relatively early stage, the UNCHS and ALECSO contributions remained in doubt until the course was actually underway. Ironically, all sources 'came good' in the end, and the Khartoum experience illustrates just what finance can be secured if several international agencies are jointly approached. At the same time, of course 'spreading the risk' is always likely to be good policy, so that the course does not entirely hinge on meeting the requirements of any one sponsor.

The multi sponsorship of a course can have drawbacks as well, however. In the course planning stage, UNCHS voiced certain doubts as to the validity of the course programme, drawing attention to the lack of substantive inputs that the trainers were to provide. It seems fair to conclude that this was not, in fact, a valid criticism given the UNESCO training philosophy for such courses and the constraints under which it was planned. Nevertheless, the matter of substantive inputs by the trainer is, perhaps, a subject worth briefly pursuing.

Figure 3.4. attempts to define the relationship between course content, training methods, technical/thematic content and the need for substantive inputs by the trainer. Along the top axis, one can envisage a range of training methods in which participants will play an increasingly significant role in determining course content (e.g. in a lecture, the content is generally determined by the trainer, in a role play the participant often has the greater say). Along the side axis, the Technical/Thematic content varies from specific to open-ended. Most training course activities will thus fall within the stipled band with the need for substantive inputs by the training ranging from high to low as shown.

A large number of UNESCO sponsored courses in the Human Settlement Managers Training programme have to date been located in the bottom right of this spectrum. In other words, courses have often been open-ended, with participants, as much as trainers, providing technical and thematic inputs. Courses have, in many instances, been planned as 'empty structures' into which participants input their own experiences and learn from others. The Khartoum course was very much in this mould and such courses provide an extremely valuable educational experience which are by no means the easiest to plan and run.

To guide potential trainers in this task, UNESCO's Division of Human Settlements and Socio-Cultural Environments have commissioned a Handbook on course design, and a number of monographs on the use of training methods. However, if less open-ended courses are to be run in future - and the need for such follow-up courses was emphasised in participant assessment sheets (Figure 3.5) - then it might well be that monographs on key human settlement management issues and themes (e.g. squatter housing, water resource management) could also play a valuable role in guiding trainers through the course planning process. Although each situation is always different, and such monographs could never provide all the answers, simple guides that outline critical issues, existing reference materials and field-tested training examples would undoubtedly help, and complement the Handbook and existing monographs on training methods.

Indeed, the need for more back-up literature was a point emphasised by a few of the participants on the course assessment sheet. In general, however, participants expressed themselves very satisfied with the course, and there is clearly scope for follow-up courses at regional level, probably focusing on more specific aspects of human settlement management. A new regional administrative structure has just been introduced and the need for regional planning and the development of regional centres to offset the pull of the capital is one area in which training could valuably be undertaken.

Finally, a note on the cultural/physiological aspects of the course. The Sudanese are very aware of their own and others position in society, and there was a considerable amount of pomp and ceremony involved in the opening and closing sessions. Speakers were far more concerned about the order in which they spoke, and who would introduce who, than would be the case in a European-based course. A certain amount of game-playing also had to be used to get all course participants to arrive on time, and to forego their mid-morning meal break. In general, however, the response from participants was very positive and a good-humoured attitude prevailed throughout the course. The presentation of a course certificate (Figure 3.6) by the Minister of Education to each of the participants was an appropriate gesture befitting the cultural/working context in which the course was held.
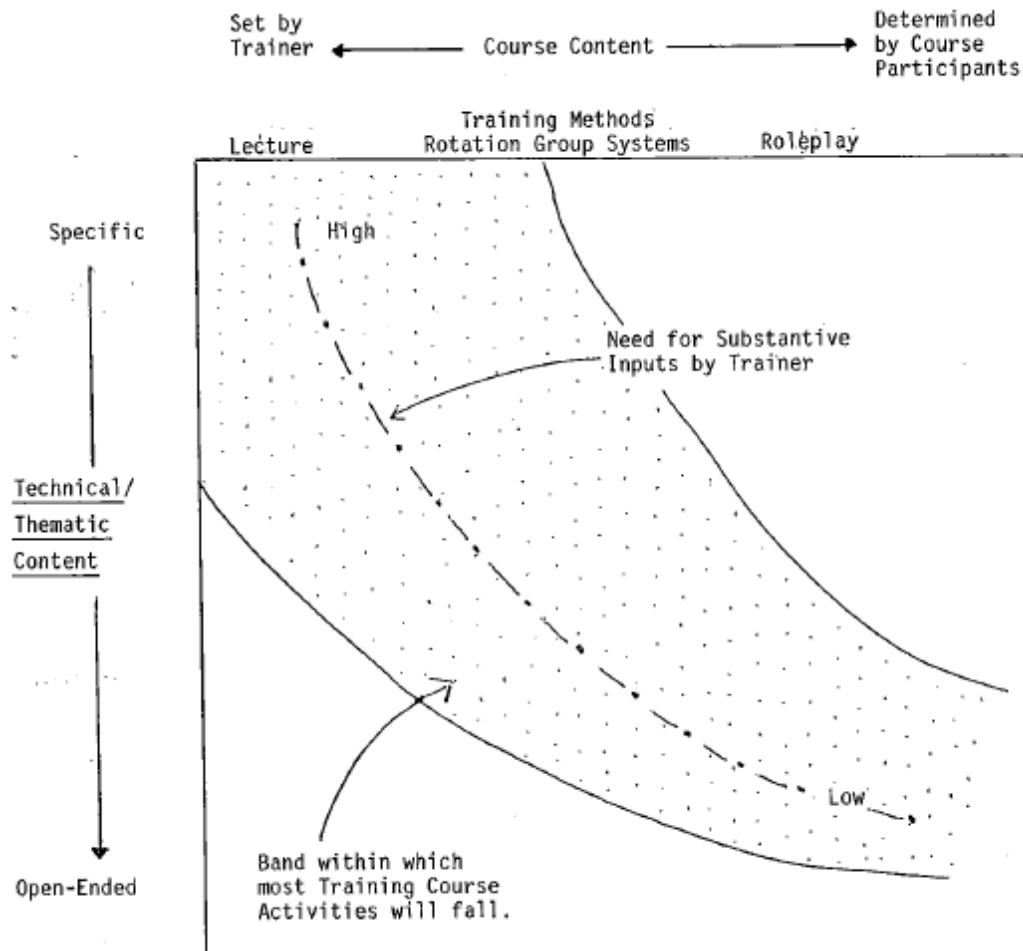
Set by Trainer ←——— Course Content ———→ Determined by Course Participants

Training Methods
Lecture — Rotation Group Systems — Roleplay

Specific

High

Need for Substantive Inputs by Trainer

Technical/
Thematic
Content

Open-Ended

Band within which most Training Course Activities will fall.

Low

Figure 3.4. Training Courses: Technical/Thematic Contents, Training Methods and the need for Substantive Inputs by the Trainer

TRAINING COURSE ASSESSMENT SHEET

Division ... Settle... ...Cultural
PARIS 75700, FRANCE

COURSE TITLE *The management of Human Settlement in hot dry Climates*   LOCATION Khartoum / Sudan

NUMBER ATTENDING 16   COURSE RUN BY UNESCO / UNCHS / ALECSO   DATES (inc) FROM 19th TO 29th

1. MAIN REASON FOR ATTENDANCE	✓ SENT BY H.O.D	REQUESTED ATTENDING	INVITED TO ATTEND
2. DID THE COURSE ACHIEVE ITS AIMS	✓ COMPLETELY	FAIRLY WELL	NOT VERY WELL	NOT AT ALL
3. TO WHAT EXTENT WERE YOUR SPECIFIC AIMS MET	COMPLETELY	✓ FAIRLY WELL	NOT VERY WELL	NOT AT ALL
4. WERE ALL SUBJECTS WELL COVERED	✓ YES	NO PLEASE GIVE DETAILS		
5. WAS THE LEVEL OF SUBJECT TREATMENT	TOO ADVANCED	✓ ABOUT RIGHT	TOO ELEMENTARY	
6. WAS THE COURSE LENGTH	TOO LONG	✓ ABOUT RIGHT	TOO SHORT	
7. WAS THE PACE OF THE COURSE	TOO FAST	✓ ABOUT RIGHT	TOO SLOW	

8. HOW SATISFIED WERE YOU WITH:

	VERY SATISFIED	SATISFIED	NOT SATISFIED	REASON NOT SATISFIED
– VISUAL AIDS	✓			
– LITERATURE		✓		
– SPEAKERS		✓		
– PLANNING AND ORGANISATION	✓			
– TEACHING ACCOMMODATION (SEATING etc.)		✓		
– TRAINING METHODS		✓		
– FIELD TRIPS, SITE VISITS		✓		

| 9. OVERALL COURSE ASSESMENT | ✓ EXCELLENT | GOOD | SATISFACTORY | BAD | ATROCIOUS |

On the reverse side of this sheet, please indicate :
(1) What follow-up training needs (at regional/local level) do you feel are necessary ?
(2) What support facilities do you need to carry out your basic job more effectively ?
(3) Any general comments ?

Fig.3.5. Example of Course Assessment Sheet (1)

Fig. 3.5. Example of Course Assessment Sheet (2)

In summary, then, the main points that emerged from the Khartoum course that might be of relevance to the planning of future courses in the human settlement managers training programme included the following:

1) Flexibility and improvisation within the overall course framework will often be necessary in such courses, when many factors remain unknown up until the last minute. The Rotational Group Systems Method is one approach ideally suited to such circumstances.
2) The selection of overseas course members might more effectively be undertaken through the international agencies themselves - UNESCO, UNCHS, World Bank - rather than through a national body of the host country.
3) The successful collaboration between UNESCO, UNCHS and ALECSO could be extended and developed on subsequent courses.
4) UNESCO might also consider commissioning monographs on a range of human settlement management issues and themes, to complement the existing Handbook and Monographs on Training Methods.
5) The recommendations for action and general momentum generated in the Khartoum course could be reinforced and extended through courses at the regional level, probably addressing more specific human settlement management issues.
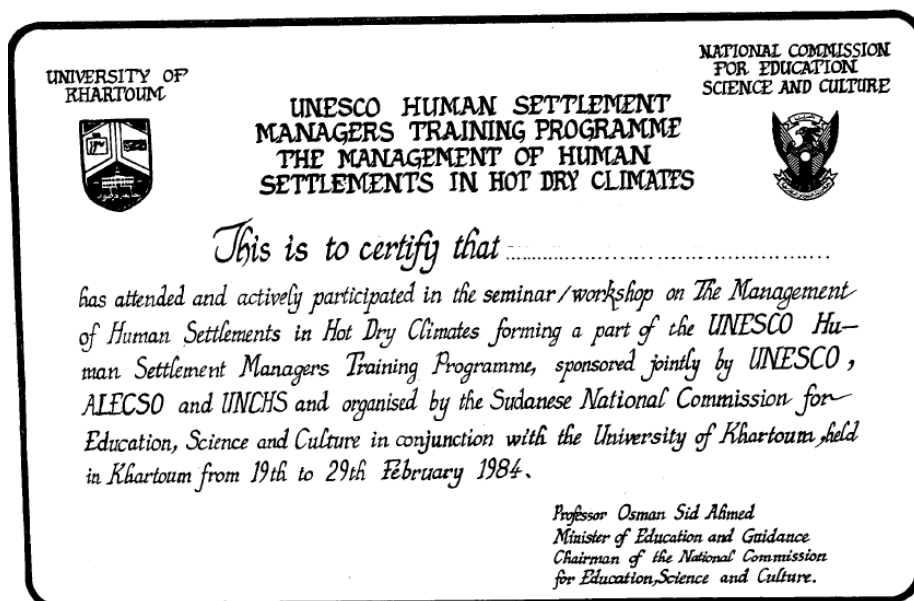

Figure 3.6. Course Certificate Presented to Participants

Appendix 1

List of participants

No.	Name	Profession	Post	Address	Tel.
1.	El Hadi Mohamed El Mowag	Educational Planner	Director of Planning for Services	Ministry of Public Services El Obeid	2790 2651
2.	Micah Losowa Mohd.	Educational Planner	Director of Educational Planning	Directorate of Education P.O. Box H41 Juba - Sudan	-
3.	Gamal Hassain Ibrahim	Town Planner	Khartoum Commissioners Office	Housing Town Planning P.O. Box 818 Khartoum	-
4..	Mohamed Ahmed Yousif	Town Planner (Architect)	Assistant Director of Housing	Housing Dept. P.O. Box 818 Khartoum	81521
5.	Dr. Mustafa Abbas Abu Reesh	Architect	Assistant Director of Housing Services	Housing Department P.O. Box 1127 Khartoum	75016 80403
6.	El Hag Saad Alla Abdalla	Economist	Inspector	Foreign Loan & Tec. Assistance Department Ministry of Finance & Economic Planning. P.O. Box 2092 Khartoum	76929 80910
7.	Omer El Farouk Mohed Nour	Sanitary Inspector	Ministry of Health Khartoum Public Health Office	P.O. Box 803 Khartoum	70554
8.	El Hussein Elmandi El Hussein	Planner	Assistant Director of Housing for Physical Planning	Ministry of Housing & Public Utilities Northern Region.	

No.	Name	Profession	Post	Address	Tel.
9.	Muawia El Tigani	Senior Public Health Inspector	Director of Sanitation Public Health Office	Khartoum Public Health Office	
10.	Mohammed Basheir Mubarak	Social Worker	Regional Director Social Welfare	Ministry of Health and Social Welfare, Medani, Sudan	
11.	Peter Jalyath Saverio	Water Engineer	Director	Ministry of Agriculture Co-operatives and Natural Resources. Upper Nil Region, Malakal, Sudan	Nile
12.	Abu El Gassiaa Yousif	Teacher	Assistance General Secretary	Sudanese National Commission for Education, Science and Culture Khartoum, Sudan	7988
13.	Dr. Martin Wynn	Trainer	Training Officer Glaxo Pharmaceuticals UNESCO Training Consultant	5 Spencers Lane Cookham Rise, Cookham Berkshire, U.K.	06285-26010
14.	Dr. Mohamed Ali Awakelkarim	University Teacher	Associate Professor	Department of Community Medicine, P.O. Box 102 Khartoum, Sudan.	71326
15.	Professor Ian Haywood	University Professor	Professor of Physical Planning	Department of Architecture University of Khartoum P.O. Box 321 Khartoum, Sudan.	70811
16.	Professor Nicholas You	Trainer	Training Officer UNCHS	UNCHS P.O. Box 30030 Nairobi, Kenya	

Appendix 2

Reference material used during the course

Janet Abu-Lughod, 'Urbanization and social change in the Arab world.' *Ekistics*, Vol. 50, No. 300, 1983

Mustafa 0. Attir, 'Libya's pattern of urbanization; *Ekistics* Vol. 50, No. 300, 1983

Lee L. Bean, 'The labour force and urbanization in the Middle East Analysis and Policy.' *Ekistics* Vol. 50, No. 300, 1983

Centre for Housing and Planning, UNDESA, 'A sites-and-services and area up-grading project in the Upper Volta, Africa' *Ekistics* 270, June 1978

Yassin A. Elkabir, 'The study of urbanization in the Arab world: A theoretical perspective'. *Ekistics* Vol. 50, No. 300, 1983

M.J. Enders, 'Housing and Settlement Patterns in Central Tunisia' *Ekistics* 287. March-April 1981

A.M. Hayuma, 'A review and assessment of the contribution of international and bilateral aid to urban development policies in Tanzania', *Ekistics*, 279, Nov/Dec. 1979

Samir Khalaf, 'Some salient features of urbanization in the Arab world'. *Ekistics*, Vol.50, No.300, 1983

Ahmed A. Mahmood-Misrati, 'Land conversion to urban use: Its impact and character in Libya'. *Ekistics*, Vol .50, No.300, 1983

R. Martin, 'Housing Options, Lusaka Zambia', *Ekistics* 261, Aug. 1977

H.N. Misra, 'Rural urban relations in Sudan: A case study of the Gezira scheme'. *Ekistics*, Vol .50, No.300, 1983

R. P. Misra and Om ar El Agraa, 'Urbanization and national development. The quest for appropriate human settlement policies'. *Ekistics*, Vol .50, No.300, 1983

Ishaq Y. Qutub, 'Urbanization in contemporary Arab Gulf States'. *Ekistics*, Vol .50, No.300, 1983

Vijai P. Singh. 'The contemporary dynamics of urban policy in the Arab Middle East'. *Ekistics*, Vol .50, No.300, 1983

M. Twefik, 'Development of service facilities in a poor industrial neighbourhood: S. Amman, Jordan, *Ekistics*, 298, Jan/Feb, 1983

UNCHS - HABITAT - Development of Indigenous Construction Sector, Nairobi, 1981.

UNCHS – HABITAT - The Rehabilitation of Existing Housing Stock, Nairobi, 1982.

UNCHS – HABITAT – Transport for Urban & Rural Areas, Nairobi, 1982.

UNCHS – HABITAT - Training for Improving Low-income Settlements, Nairobi, 1978.

UNESCO - HABITAT - Physical Improvement of Slums and Squatter Settlements, Nairobi, 1977.

UNESCO - HABITAT - Formulation of National Settlement Policies and Strategies,

L.R. Vagale, 'People and Planning: focus on Africa', *Ekistics* 279, Nov/Dec. 1979.

The Management of Human Settlements in Hot Dry Climates
Mission Report
(incorporating Course Assessment Sheets) Khartoum, Sudan, Feb.19th-29th 1984

Dr. M. Wynn, April, 1984

The Management of Human Settlements in Hot Dry Climates
(Khartoum, Feb.19th - 29th 1984)

Mission Report

1. Despite considerable uncertainties throughout the planning stage, the course itself was extremely positive and participant involvement, commitment and exchange were high.

2. The conference proceedings include a full report on problems and recommendations for action in three main areas of Human Settlement Management in Hot Dry climates with particular reference to the Sudan. This report, which is the product of intensive group work on the examination of major issues, was presented to the Minister of Education and a wide range of public officials and academics on the final day of the conference.

3. The collaboration with UNCHS (Habitat, Nairobi), was a particular success. Although he was only here for the first four days of the course, the inputs of Professor Nicholas You, were of great value in stimulating participant thinking and exchange. I would strongly suggest that further opportunities for similar collaboration should be explored and developed. UNCHS have a range of materials, particularly in the housing field, that could be utilized on UNESCO-UNCHS courses, to provide substantive inputs. In addition, they have access to World Bank data on Human Settlement managers working in the field that could aid course member selection.

4. The course participants on the Khartoum course in fact represented a wide range of disciplines and ministerial perspectives, which was a great asset in stimulating exchange of views and experiences.

5. The back-up services provided by the University of Khartoum and National Commission for Education, Science and Culture, were adequate (typist, photocopier, overhead projector etc). Prof. Ian Haywood played a key role in overall planning and co-ordination in difficult conditions.

6. Future developments emanating from the Khartoum course and the completion of the Handbook for the design and organisation of courses could include:
   - the field testing of the Handbook and accompanying Method monographs, as a guide for trainers.
   - this could be undertaken in the Sudan, where there is great scope for follow up courses at the regional/local level, and where key contacts have now been established.
   - the introduction of an indexing system for human settlement management courses to provide information for trainers in the course planning stage. Classification of data could be structured to include:
     - Problem Set Factors
     - Training Goals and Learning Objectives
     - Substantive inputs
     - Training Methods
     - Areas of Concern (geographical/thematic/professional etc)
     - Participant characteristics (profession, nationality etc)

(This type of information could, of course, be computerised at UNESCO to provide a readily available data information system for trainers. Maybe you have something like this already?)
   - the addition of monographs on key substantive issues to complement the Handbook and training method monographs (See Section 3 of the Final Report).

7. Course Assessment sheets are included overleaf. Main points which recur throughout include:
   - the general satisfaction with the course documentation.
   - the dearth of readily available information and documentation on human settlement management issues in the Sudan.
   - The opportunity for follow-up courses and the development of training activity in general in the Sudan, linked to UNESCO/UNCHS/ALECSO sponsorship and organisation.