

# MINUTES OF THE 1ST AND 2ND SESSION OF THE 11TH MEETING OF THE EASTERN AND SOUTHERN AFRICA SUB-COMMITTEE FOR SOIL CORRELATION AND LAND EVALUATION

MOROGORO, TANZANIA 6TH - 10TH NOVEMBER, 1995

## Official opening of the meeting

The meeting was opened under the Chairpersonship of Mrs. N.A. Sumari, the Regional Development Director of Morogoro region, Tanzania. Present at the opening were the FAO Resident Representative in Tanzania, Dr. E.P. Alleyne; the Commissioner for Research and Training of the Ministry of Agriculture, Tanzania, Dr. F. Shao; and the Assistant Commissioner for Special Services in the Ministry of Agriculture, Tanzania, Mr. E.N.L. Ngatunga.

The Assistant Commissioner for Special Services welcomed the participants and invited guests to the meeting. He invited the Commissioner to deliver his speech.

The Commissioner for Research and Training, in his address, said the importance of these meetings was that scientists' work is subjected to peer reviews whereby participants receive critical comments on their methodologies, results and assumptions and thus be able to validate their work.

Secondly, through such meetings regional scientists are assured of a permanent forum for reporting their results and getting opportunities to identify significant achievements in the region. Thirdly, scientists will use this occasion for exchange of information which hopefully will allow them to improve collaboration among themselves.

The FAO representative to Tanzania pointed to the problems of uneven distribution of demands on the land resources, alarming status of erosion in many parts citing several areas in Tanzania, a fast rate of forest depletion. Against this background he mentioned the following FAO's global and regional programs in Africa as being of special relevance:

- the International Scheme for the Conservation and Rehabilitation of African Lands which was approved by the Regional Conference for Africa in 1990. Twenty countries are now active participants;
- FAO's assistance to member states in establishing a Geographic Information System (GIS) which results in the assembly, storage and processing, and cross linkage of crucial data for land use planners and a wide range of policy makers who's influence impact on the national land resource base.

Basing on the negative balance between relief aid and development aid due to increasing relief aid, he said countries in a food deficit situation have two options: expansion for production i.e. opening up more land or intensification of production on existing land areas. Wise choice demands matching requirements and strategy to the resource base. This is applicable to a range of products: food, fibre, energy, timber and cash crops. Sound land use policy must be at the very core of development planning on a national scale. He, therefore, expected the meeting to assist in the development of guidelines which would enhance policy formulation and implementation in the countries of the sub-region.

The Guest of Honor dwelled on the need for identification, mapping and assessment of land resources in the planning of land use. He warned that this process is a multi-disciplinary one and hoped that the recommendations of the meeting on the use of soils would recognize the input of agro-meteorologists, hydrologists, agronomists and socio-economists. She said the world is faced with problems in the areas of man-induced land degradation e.g. erosion, secondary salinization and over-grazing. Our challenge now as occupants of this region is to find the best and efficient ways of using land and other natural resources in creating wealth, without compromising environmental quality as well as the quality of human life. The proper utilization of our land resources depends on land resources inventories, characterization and interpretation at appropriate scales coupled with dissemination of this information to policy makers, land use planners and land users. In view of the importance of the results of soil survey and land evaluation, the guest of honor called for guidance in the use of scientific jargon in order to make the recommendations clear and understandable by the farming community. She said scientists often tend to forget the real land user.

## Election of the bureau and adoption of the agenda

The sitting chairman was Mr. A. Kintukwonka from Uganda. Election of the bureau was conducted and the following were elected into office:

Chairman:	Dr. K.L. Haule	(Tanzania)
Vice Chairman:	Ms. M. Menete	(Mozambique)
Rapporteur:	Mr. J.P. Magoggo	(Tanzania)

The agenda was adopted with the following modification: the papers from Kenya and Lesotho to be moved to the end.

## **SESSION 1: COUNTRY PAPERS**

### **Tanzania**

The paper introduced Tanzania's environmental profile in terms of land area, population, landforms, climate, hydrography, soils and agro-ecological zones. It then described the land use planning process in Tanzania which starts with identification and characterization of resources and attaching a spatial relationship to them followed by biophysical land evaluation, socio-economic land evaluation and an assessment of environmental impacts. Decisions and implementation of land use plans are made at all levels beginning with the village to national level.

The paper noted an absence of both a national soil policy and a land use policy.

### **Uganda**

The paper briefly highlighted Uganda's relief, climate, soils and economy. It gives a historical narrative of various acts aimed at controlling individual types of land use such as mining, forestry, cattle grazing, etc.

The paper described a proposed national soil policy which has not yet been ratified, and a land use policy. Instead, the country has bye-laws and these have a heavy emphasis on soil conservation. It concluded with suggestions on how the soil policy in Uganda should best be implemented, pointing out the importance of the extension services, the need to establish a national commission on land use and to charge the technical implementation to a research institution in the National Agricultural Research Organization.

### **Kenya**

The delegate from Kenya was not present. The paper was not available.

### **Zambia**

The paper described the bio-physical and socio-economic setting of Zambia in terms of climate, human population, the economy, property rights and broad land tenure systems. It dwelled in the justification for a land use policies by pointing out aspects of the bio-physical and socio-economic environment that are of concern for sustainability of land resources in Zambia: deforestation, soil fertility decline, food insecurity, population increase with consequent scarcity of land, labor constraints, poor infrastructural development. The paper stressed that all these issues lead to degradation of land resources.

In trying to manage land resources in Zambia, several sectoral acts have been implemented, presumably prompted by information concerning environmental degradation such as deforestation, soil fertility decline, etc. However, the paper pointed out that it is the socio-economic consequences of the effects of soil fertility decline such as reduced food production leading to hunger that have pushed government to adopt land use policies with sustainable strategies.

The paper stressed that for any conservation program to succeed, there is need to satisfy the people's priorities first because they will never have the time for any other project before their priorities are met.

### **Botswana**

The paper gives a background to Botswana's development priorities in the rural sector and livestock production. It shows governments recognition of the importance of land resources inventory and land evaluation in achieving development objectives. It described several projects and programs including soil survey and land evaluation, Land Resource Assessment for Agricultural Land Use Planning, Land Use Planning for Sustainable Agricultural Development.

The paper shows that land use planners in Botswana have been in a fortunate position of having access to a large number of relatively well developed computerized database with national coverage.

### **Malawi**

The paper started by describing the major land resources of Malawi. These include land and water bodies, soils, forests and climate.

The paper listed proposed land use policies in Malawi:

- (a) preventing the cultivation of marginal lands such as steep slopes and along river banks;
- (b) requiring bunds to be constructed where ridges are used in the garden;
- (c) controlling felling of trees, banning of bush fires and the practice of *visoso*;
- (d) compelling box-ridging to be practiced in areas of low rainfall;
- (e) obliging individuals, communities, and private enterprises to plant fuel wood on their gardens or estates.

In the paper, the role of land resources in the formulation of the above policies was demonstrated summaries of technical considerations involved.

### **Mozambique**

In the paper, a historical perspective of Mozambique was presented starting after independence with a period of socialization, going through periods of economic recovery and economic adjustment. The paper shows the recognition by government of the role of land resources information in development planning by according high priority to the completion of a national soils map at 1:1 million scale. To further demonstrate the importance of land resources data in development the paper described regional resources assessment studies which have led to production of the National Land Resource Inventory at the scale 1:2 million and a land use map at 1:500 000 scale in addition to agro-climatic suitability maps for sorghum, millet, maize, groundnut, cassava, and soybeans at two management levels at 1:5 million scale. An erosion hazard map of Mozambique was produced at 1:2 million scale. Systematic regional soil surveys and evaluations for Maputo, Gaza, Nampula, Cabo Delgado, Manica and Zambezia provinces resulted in several soil maps at 1:250 000 scale and 68 maps at 1:50 000 scale for the southern part of the country.

Despite the above achievements in terms of resources inventory and assessment and an increasing use of natural resources information for policy formulation, however, the paper points out that this information did not play a major role in policy formulation, but was and is crucial for its implementation. Policy formulation was mainly geared towards the country's ideological orientation and lately also under donors pressure.

### **Swaziland**

The delegate was not present. The paper defined a land use policy as a document or set of documents spelling out clearly how the land should be used or how decisions on land use are taken. It is the set of rules or guidelines on the use of land in order to achieve goals and objectives of a community or those who have to benefit from the land. It said a policy is designed to bring about a desired change and to resolve an identified problem. It then described an economic view of policy formulation. In this regard it pointed out market imperfections in the natural resources sector which can result in inefficient allocation of resources, e.g. off-site effects. The paper went on to list development objectives of public policy in natural resource management. The list is long but includes economic efficiency, equity, growth, quality of life, food security among others.

The last part of the paper dealt with issues that should be considered in formulating policy. Among them are capacity building, reconciling conflicting objectives, streamlining of the land use planning process from data collection, analysis to decision making.

One of the conclusions of the paper was that social and cultural factors are not neutral elements in the development of environmental policy.

### **Lesotho**

The delegate from Lesotho was not present. Paper was not available.

### **Ethiopia**

The paper briefly described Ethiopia's population, economy, climate and soils. The paper provided a detailed description of the country's geomorphology and soils map, the land resources map (which is an overlay of thermal zones, length of growing periods and the soils and geomorphology map), the agroclimatic resources map and the land use and land cover map. Land suitability and potential maps have been derived from these documents.

The paper showed that a national conservation strategy and policy is in place in Ethiopia. Its objective is to give priority to the conservation and development of natural resources.

### **Sudan**

The delegate was not present. The paper began with a definition of land use planning and the need for it. Then it described the situation of Sudan giving statistics on the economy, land and water resources, agriculture and coverage of soil survey studies.

The paper noted that the effectiveness of regulations introduced by the land use conservation and Water Department of the Sudan Ministry of Agriculture to recommend and regulate the proper use of land for agricultural purposes was questionable. The paper alluded to lack of a national organ for the protection of the environment as the cause for lack of effectiveness.

### **Zimbabwe**

The paper presented the results of a study into land use patterns on two areas with different soil and climatic characteristics. The paper examined in detail how the limitations imposed by soil and climate have resulted in particular land use options.

The two cases studies presented provided examples that demonstrate the way agricultural activities are shaped by soil properties in combination with climate and topography. The development of tea, coffee, and timber plantations in the Eastern Highlands was a result of proper matching of crop requirements and land qualities. Because of different soil limitations and harsh climate, agricultural activities on the Kalahari Sandveld have taken a different direction as compared to that in the Eastern Highlands. The Kalahari Sands have been kept under indigenous hardwood forests and with the high diversity in vegetation species for tourism or hunting has been developed.

## **SESSION 2: IMPACT OF ESASC MEETINGS**

### **Malawi**

The presentation showed that the meetings had helped improve Malawi's national soil survey and land evaluation program in terms of exposure to methodologies and availability of literature. The report expressed a need for a more time for the field excursion. The delegate reported that implementation of the recommendations of these meetings in Malawi is not smooth due to shortage of funds, equipment and expertise or administrative problems.

### **Zambia**

The Zambian delegate listed experiences gained by scientists from themes of the various meetings. The presentation showed that in general at each meeting new light was shed on how to handle problems encountered in the Zambian soil survey and land evaluation program. There were no major problems pertaining to the running of the ESASC meetings.

The report suggested that the recommendations of the meetings should be sent to each FAO Representative in the member countries to be forwarded to the Ministries concerned. This was seen to be one way of getting member countries to take the recommendations seriously.

### **Botswana**

The delegate saw the impact of these meetings in providing mutual exposure to scientists from the member countries, a forum for exchange and possibilities to update on the "state of the art". The report, however, saw a possible duplication of effort with SADC especially on issues related to land evaluation.

The delegate recommended that

- . governments be sensitized about the importance of these meetings;
- . FAO should liaise with other regional bodies such as SADC to avoid duplication.

### **Tanzania**

The presentation reported several achievements related to the ESASC meetings. It showed these meetings as being effective training fora. It pointed out financial constraints as being a major reason for unsatisfactory implementation of some of the recommendations of these meeting citing the lack of a systematic coverage of soil surveys.

The report recommended:

- . that these periodic meetings should be continued;
- . that short-term training courses, seminars and workshops should be encouraged;
- . possibilities for training courses of duration of up to 9 months or more;
- . that past recommendations should be revisited to ensure implementation of these recommendations by member countries in the region.

. networking to facilitate exchange of information within the region and other regions.

**Other countries**

Reports from other countries were not available.