FORESTRY OUTLOOK STUDY FOR AFRICA

Report of the Southern Africa Technical Workshop
16 - 18 January 2001, Pretoria, South Africa

AFRICAN DEVELOPMENT BANK

DEPARTMENT OF WATER AFFAIRS AND FORESTRY, SOUTH AFRICA

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

TABLE OF CONTENTS

Background

1. The Forestry Outlook Study for Africa (FOSA) was initiated on the request of the African Forestry and Wildlife Commission and the Near East Forestry Commission to provide a long term perspective of forestry development in the Region, and more particularly to identify the scenarios and options for the sector in the context of the various economic, social, environmental and technological changes. The study will analyse the forces shaping the future of African forests and forestry, outline the likely scenarios of development in the forestry sector to the year 2020, and indicate policy, program and investment options available to the countries. To provide an in-depth assessment taking into account the ecological, economic and social variability, it was agreed to have a sub-regional focus and accordingly, for the purpose of FOSA, Africa has been divided into 5 sub-regions[1]. The Southern Africa sub-region consists of 10 countries namely Angola, Botswana, Lesotho, Malawi, Namibia, Mozambique, South Africa, Swaziland, Zambia and Zimbabwe. During March - April 2000, a planning meeting for the Southern Africa sub-region was held at Lusaka in conjunction with the twelfth session of the African Forestry and Wildlife Commission. During the Lusaka meeting the overall plan of FOSA was discussed and agreed upon.

2. The Lusaka meeting also discussed the proposal for preparation of country outlook paper and its structure and contents. At the country level the governments nominated a FOSA focal point and further in most cases a working group was set up to assist the country focal point. FAO provided partial financial support to facilitate data collection, meetings, cost of communication, etc. But most of the resources – technical and material - came from the focal organizations in the countries, in particular the Forestry Departments. When the first draft of the country paper was ready, it was considered appropriate to bring all the country FOSA focal points together to share the findings and to learn from the experience of other countries. It was also felt that such a workshop would help to share ideas and methodologies on identifying the future outlook and thus help to improve the country outlook paper.

3. The Southern Africa FOSA Technical Workshop was held at Pretoria, South Africa during 16 – 18 January 2001. The Department of Water Affairs and Forestry, Government of South Africa hosted the meeting and provided technical and logistical support. FOSA focal points/ representatives from 7 countries, namely Malawi, Namibia, Mozambique, South Africa, Swaziland, Zambia and Zimbabwe participated in the workshop. The meeting was also attended by Mr. M. Ngulube (Head of the SADC-Forestry Sector Technical Coordination Unit), Mr. Hennie Coetzee (Member, FOSA Expert Advisory Group) and Mr. Michael Chihambakwe (FOSA Consultant for the Southern Africa Sub-region) as also other invitees. The agenda of the workshop and the list of participants are provided as **Appendices I** and **II,** respectively.

Objectives

4. The objectives of the technical workshop were to: (a) share the findings from the draft country outlook papers, specifically focusing on the future scenarios for the forestry sector in 2020; (b) exchange ideas, concepts and issues relating to outlook studies and understanding more about outlook methodologies including the key issues relevant to the Southern Africa situation and (c) discuss the provisional outline of the sub-regional report as also mechanism for obtaining additional relevant information in support of preparing the sub-regional outlook paper.

[1] These sub-regions are Northern, Eastern, Southern, Central and Western Africa and the grouping of the countries follow the classification adopted by the African Development Bank.

Opening Session

5. The opening session was chaired by Ms. Lael Bethlehem, Chief Director of Forestry, Department of Water Affairs and Forestry, Government of South Africa. Ms. Bethlehem welcomed the participants to South Africa and drew attention to some of the topical issues in South Africa in the context of defining the long term prospects for forestry development. Ms. Bethlehem highlighted the importance of forestry and forest industry in South Africa and the shift in the focus of public sector to manage indigenous forests and to function as a regulatory authority. Specifically Ms. Bethlehem emphasized the importance of FOSA in providing an indication of the future direction of developments at the regional and global level, so that efforts at the national level could take cognizance of the anticipated direction of change.

6. The FAO Representative for South Africa, Dr. Florence Chenoweth made an opening statement emphasizing the importance of long term outlook studies. In particular Ms. Chenoweth referred to the environmental crisis like loss of biodiversity, depletion of water resources, land degradation and their impact on the rural communities and emphasized the need for long term outlook studies to provide an indication of the situations that are likely to emerge and how the countries may respond to the different scenarios.

7. Mr. M. Ngulube, the Head of the SADC Forestry Sector Coordination Unit pointed out that poverty alleviation is a key objective in the SADC countries and FOSA should provide a clear indication of the probable future directions of development. Of particular relevance to the Southern Africa sub-region are (a) development of the democratic institutions and (b) the impact of HIV/AIDS. Specifically Mr. Ngulube referred to the potential for increased regional collaboration through the SADC forestry sector protocol.

8. Mr. Peter Lowe, Forestry Planning Officer, provided an overview of the FOSA process and the progress made since the Lusaka planning meeting in March - April 2000. In addition to outlining the FOSA framework and the linkages between different component activities, Mr. Lowe explained the scope of the country outlook papers and how they will form an important basis for preparing the sub-regional outlook report. Further, it was emphasized that, apart from helping to provide a long-term view of the developments in the forestry sector and the emerging opportunities, FOSA strives to adopt a participatory process to develop a collective vision as also to improve the country capacity in long term perspective planning. He outlined the objectives of the workshop and how it is structured to accomplish them.

Presentation of country outlook papers

9. The first half of the Workshop was primarily devoted to the presentation of the country outlook papers and the discussion of the key issues relating to the changes taking place in the forestry sector as outlined in the papers. Each of the FOSA focal point outlined the approach adopted in preparing the country outlook report, provided an overview of the main findings and some of the key issues relating to changes in the sector. Important findings from the country outlook papers are summarised below:

Malawi

10. Malawi is the most densely populated country in Southern Africa with a density of over 100 persons/ km2, and is primarily a low income agrarian economy. Population growth has declined in the recent years to about 2% largely due to AIDS as also on account of the impact of family planning initiatives. With a low per capita income of US$ 220, it is one of the poorest countries. It was noted that population growth (although the rate is declining) combined with the continued dependence on land as the main source of livelihood will continue to exert pressure on the forests.

11. There are considerable uncertainties as regards the future of the forestry sector, especially in view of the negative trends in population, income, low level of skills, etc. Wood is expected to continue to be the main source of household energy exerting pressure on forests as also tree resources outside the forests. The land-locked nature of Malawi and the limited access to markets is a major problem that needs to be overcome. The country outlook paper also noted the decline in the tobacco industry which will in some ways reduce the demand for wood fuel and possibly provide new opportunities for tree planting in the abandoned tobacco farms provided this is seen as an economically viable option.

12. It was noted that increasingly there will be reliance on trees outside forests. Much of the wood will be of smaller dimensions and this will require changes in the technology of processing. In this regard it was noted that, contrary to experience elsewhere, the pit sawing industry is growing rapidly, largely because of the increasing demand from the construction sector. Issues like technological improvements in sawmilling was highlighted. Another factor that are of key importance relates to the pricing policy of the government, which at present is a disincentive for investment. Ongoing efforts to privatise the government owned plantations and some of the existing constraints were also noted.

Mozambique:

13. The country outlook paper for Mozambique outlined the overall social and economic context of forestry in Mozambique. Of the most important feature of Mozambique is that although the country is one of the poorest in Africa, positive government policies have led a consistently high growth rate of the economy. The total forest area is estimated as 62 million ha[1] (or 78% of the land area) and the pressure of population has resulted in the loss of about 4.27% of the forests over a period of 18 years during 1972 to 1990. Concentration of population in certain areas has particularly contributed to a high rate of deforestation in certain provinces as in the case of Maputo province where the loss of forest cover during 1972 to 1990 has been about 20%.

14. It was noted that 80% of the population is dependent on agriculture and considering the population growth rate of 2.7% per annum, it is expected that there will be continued pressure for extension of agriculture through deforestation. Also considering the high growth rate of the economy, there will be an increase in the domestic demand for forest products. Of particular relevance is the continued dependence on wood as a source of household energy, with 80% of the population using biomass as the main source of energy. Although there has been an increase in the use of commercial energy, for the vast majority of the population biomass will continue to be the main source of energy on account of the high costs as also uncertainty of supply of commercial energy.

15. All the indications that Mozambique will witness continued deforestation and as per the estimate provided in the country report some 2.4 million ha will be converted into agriculture between 1994 and 2020. Improved access is expected to open up new areas for commercial exploitation. There are also indications of possible increase in the area of plantations of fast-growing species, largely linked improved investment climate for the private sector within Southern Africa and outside.

Namibia

16. The Namibian economy has registered rapid growth in the last few years and in comparison with several other countries has a high per capita GDP of over US$ 1,900. Further the population (and population density) is low, although the rate of growth continues to be high. By 2020 the population is expected to reach 2.63 million. Climatic and other conditions impose limitations to what can be done in the forestry sector and it is noted that for most of the timber and products like pulp and paper Namibia will continue to depend on imports. Much of the thrust of the forestry sector will be on meeting the local needs, especially of wood fuel and non-wood forest products as also the

[1] Although as per the recent Forest Resource Assessment 2000 by FAO, the forest cover is estimated as about 30 million ha, largely due to the differences in the definition used.

demand for wood from the growing handicraft industry. Wildlife based tourism is also recognised as a sector with considerable potential.

17. Meeting the local demand for wood fuel and non-wood forest products would be the key priorities for management of the forests in Namibia. This is proposed to be facilitated through the expansion of area under community management. By 2020, it is visualised to bring about one million ha under community forestry. No large scale expansion of forest plantations is expected and at the most the total area under plantations is unlikely to exceed 10, 000 ha. New developments envisage the use of the invader bush, *Burkia africana* to produce chip boards, the technology of which has been developed and the development of indigenous fruits, especially cultivation, processing and their marketing.

18. It was noted that Namibian economic development will be largely dependent on the performance of mining, commercial agriculture (especially animal husbandry), fishing, meat and fish processing, and tourism. A critical issue is the existing inequities in land distribution and income. Although Namibia has a very high per capita income, it has a highly skewed distribution of income. Future scenarios of development will depend upon how the social problems relating to land and income distribution are resolved.

South Africa

19. South Africa has a number of unique features, both in terms of the social and economic conditions as also the development of wood based industry. The changes in the political, institutional and social fronts since 1994 have been significant and these changes will continue to have direct and indirect impacts on the forestry sector in the foreseeable future. In contrast to other countries in the sub-region, South Africa has a highly developed industrial sector and in terms of the social development indicators one of the most developed in the region. It also has a very high rate of urbanisation with urban population accounting for about 54% in 1996.

20. As in the case of other countries, there are no reliable estimates on the area of natural forests, due to the absence of any recent mapping of forests other than the National Land Cover Survey and partly due to the problem of definition. Although the total area of woodlands is estimated as 40 million ha, they are largely outside the purview of forestry legislation and not actively protected and managed by government. Management is largely focused on about 350,000 ha of indigenous forests and 1.5 million ha of plantations, a substantial proportion (about 70%) is privately owned. The South African wood based industry draws its strength from these plantations. There has been a steady increase in wood production from the plantations from about 15 million m3 in 1988/89 to about 18.6 million m3 in 1997/98.

21. The outlook for 2020 for the forestry sector primarily draws up on the Fibre Options Study of 1999 by the Department of Water Affairs and Forestry. The study envisages a steady growth in the production of wood, primarily from plantations. It is noted that South Africa will continue to be a major exporter of wood products, and will be able to meet all its domestic needs. Further it is pointed out that wood availability will not be a limiting factor in the growth of wood industries. Key issues discussed in the paper include competitiveness of the wood industry, industry hosting environment and water supply and availability. Issues like future management of natural woodlands, especially in the communal areas, potential of non-wood forest products, management of wildlife, etc. requires elaboration.

Swaziland:

22. The presentation[1] on Swaziland focused on some of the salient features of the forestry sector and the overall economic context in which forestry has to operate. Current population is estimated as 1.0 million and it is growing at the rate of 2.7% per annum. The economy of Swaziland is strongly

[1] The country outlook paper from Swaziland is under preparation and the FOSA focal point provided some of the salient features of the sector, which will be elaborated in the outlook paper.

linked to the economy of its neighbours, in particular South Africa and therefore what happens to the economy of South Africa will have a significant impact on Swaziland's economy and the forestry sector. The forest industry in Swaziland is foreign owned and the private sector will form the main engine of development.

23. There are considerable uncertainties relating to the development of the forestry sector in Swaziland, especially with regard to forest plantations considering its dependence on the demand from the South African forest industry sector and the overall competitiveness of the Swaziland plantations in comparison with other emerging producers. The potential for non-wood forest products and services needs further assessment. Also it is important to consider the need for strengthening the human resources. All these need to be considered in the context of possible social and institutional changes.

Zambia:

24. The forestry prospective for Zambia is extremely challenging in view of the growth in population and the high incidence of poverty, especially in the rural areas. The population in 1998 is estimated as over 10 million of which 40% is urban. Mining has been an important sector that contributed to the economic growth in the past, as also towards urbanisation. Recent trends as regards economic performance has been not very positive and the growth rate of GDP has declined significantly. Poverty is widespread and it is estimated that 68% of the people are below the poverty line. The situation has been aggravated by the implementation of the structural adjustment programme. Agriculture expansion is taking place at the extensive margin contributing to increased forest clearance. All these factors need to be taken into account in identifying the future scenarios for the forestry sector.

25. Zambia has about 44.6 million ha under forests and woodlands, which is almost 60% of the land area. Nearly one third of this is in customary land. While the area of forests is known, no recent estimates of the condition of growing stock is available since the last national level inventory in the 1960s. About 7.1 million ha is under forest reserves and this includes some 50,000 ha of plantations. Most of these plantations are under the management of the Zambia Forestry and Forest Industries Corporation. There has been some private sector investment in plantations with an estimated area of 3,000 ha.

26. Among the factors that will influence forestry in the next 20 years is the expansion of agriculture. In the absence of increased productivity expansion of agriculture production will necessarily imply forest clearance. Studies undertaken in the context of the preparation of the Zambian Forestry Action Plan indicates a decline in the area of forests under customary ownership by 3.6 million ha during the period 1996 – 2016. The outlook also envisages continued dependence on wood energy, which currently meets 68% of the total energy demand. It is pointed out that although at the aggregate level, the supply is adequate to meet the growing demand, the differences in the pattern of resource distribution and population leads to over exploitation in certain areas and consequent resource degradation. The future outlook also depends on the outcome of various initiatives, including the recent changes in forest policy and legislation, the emphasis being given to promote participatory approaches and importantly the importance being assigned to facilitate women's involvement in forest resource management.

Zimbabwe:

27 Zimbabwe is largely an agrarian economy and considering the low level of industrialisation, increase in population will continue to have an impact on forest land. The population in 1997 is estimated as 12.2 million and growing at the rate of 2.5% per annum although the impact of HIV/AIDS on demography is yet uncertain. Although about 66% of the country is covered by forests and woodlands, annual deforestation due to expansion of agriculture is estimated as 70,000 ha. Even when there is migration to urban areas for employment, people still would like to own land for livelihood security. Land tenure is a key issue and the current efforts to bring about changes in the way land is historically owned is expected to have an impact on forest management.

28. Considerable thrust has been given in the past for establishment and management of plantations, mainly of exotics. the extent of plantations in Zimbabwe is estimated as 150,000 ha. On account of the considerable research efforts in the past, the plantations have attained a high level of productivity, and this an area of comparative advantage of the Zimbabwean forestry sector. There is increasing interest in the private sector, including international companies in investing in the forest plantations and industry in Zimbabwe, although in the recent years the economic decline has caused some uncertainties.

29. A number of institutional changes are taking place in the forestry sector, partly compelled by the structural adjustment programme necessitating a reduced role for the public sector. The Forestry Commission is being restructured into a leaner organization largely to function as a regulatory agency. Most of the forest plantation management will be taken by the private sector. Emphasis is also being given to enhance the participation of communities in the management of communal and resettlement areas. As regards the long-term prospects of timber production, it is noted that the domestic demand will continue to be low and hence there is a need to explore outside markets for processed products. Close ties with industries, especially some of the global players is expected to improve the technology for processing and improve the access to markets.

Group Discussion

30. Drawing upon the country outlook papers, the meeting Secretariat drafted a preliminary list of issues and questions relevant to Southern Africa. This was elaborated during discussion and a revised list of issues and questions was prepared. Two working groups were formed with each group taking up a set of interrelated issues for discussion. Findings from the group discussion are briefly indicated below:

Land reforms and other cross-sectoral issues:

31. Of the most critical issue that was noted during the discussion is the need to harmonise the policies in the different sectors. It was noted that policies of different sectors are formulated without taking into account their implications on other sectors. This is particularly the case with sectors like agriculture, which will have a number of direct and indirect impacts on forestry. In the Southern Africa context the following were identified as important:

- The ongoing efforts in a number of countries to implement land reforms will have a significant impact on forest resources. While the conventional belief is that this may lead to forest clearance for cultivation, there are opportunities to involve the land owners and settlers in conserving and sustainably managing the forests;
- Necessary incentive system should be in place to encourage farmers to maintain and improve the tree cover in farm lands;
- Urbanisation will continue to have an impact on forests, especially in the peri-urban areas.

Institutional changes and empowerment

32. Noting the rapid changes in the institutional arrangements for forestry during the last few years, the meeting envisaged a very different institutional scenario during the next two decades. Changes already underway are expected to gain momentum as indicated below:

- The role of public sector institutions like the forestry departments will continue to redefined with decreasing involvement in commercial functions and increasing emphasis on their policy and regulatory responsibilities as also on provision of public goods;
- Community participation in forest resource management is expected to become more widespread than it is today. Similarly there will be increased involvement of the private sector, especially in plantation management. Approaches like out-grower schemes currently being adopted on a smaller scale are expected to become more widely accepted.

- Interest and involvement of civil society would improve transparency and accountability and this could contribute to gains in efficiency.
- Although decentralisation of administration is being adopted as part of a larger social and economic policy, many countries are yet to have a clear grip on the problems. The capacity at the local level to manage the resources is very weak. Further, the arrangements for sharing the responsibilities for resource management are yet unclear.

33. The meeting however noted the need for improvement in the image of the sector and that financial and material inputs for sustainable forest management may not increase unless efforts are made to highlight the multifarious contribution of the sector. In this regard the need for proper valuation of goods and services from the sector was emphasized. It was also noted that the current situation of conflicts is undermining long term investment in the sector. A high turn over of qualified staff also needs to be taken into cognizance and this is already proving to be a limiting factor in the development of the sector.

Plantation forestry:

34. Although constraints of water impose some limits to expansion of plantation forestry in some of the traditional areas, considerable potential exists in a belt stretching over Angola, Zambia and Mozambique. The bio-climatic studies already undertaken in this regard should be reviewed and the scope and constraints for increasing the area under plantations should be assessed. Further there is scope for intensification in South Africa and Zimbabwe. One of the main constraints with regard to expansion of plantations in the traditional areas is water availability. In countries like South Africa water has already become a major constraint in expanding the plantation programme. Another factor to be taken into account is the uncertainty arising from the current situation with regard to land tenure and the highly skewed nature of land ownership arising from the historical factors. This would require the development of more equitable arrangements and ensuring that land reforms act as a positive element encouraging long term investment.

35. Other constraints include the reluctance of the private sector to invest in plantations, largely due to the perceived risks as explained earlier, as also the poor infrastructure, inadequate human resources and the inadequate processing capacity, except in the case of South Africa. Development of infrastructure, especially roads and other transportation facilities is critical to the expansion of the plantation programme. These constraints need to be weighed in the context of certain advantages, especially low costs of production, improved potential for collaboration within the framework of SADC forestry protocol, relatively developed technological capability, especially with regard to tree improvement and, more importantly, the nearness of the sub-region to the emerging markets in Asia. The geographical position of Southern Africa is such that it provides rather easy access to all the current and potentials markets in Europe, North America, Middle East and Asia. There is a growing demand for industrial charcoal, and currently South Africa is importing this, which could be easily produced within the sub-region. South Africa has also the potential to develop as a major producer of pulp and paper.

Privatisation in forestry:

36. The sub-region, especially South Africa, has a lot of experience in private sector involvement in plantation management. It was noted that privatisation is more appropriate in the case of plantations where the objective is rather limited and focused on commercial/ economic considerations. In the case of management of natural forests, there are several objectives, several of which are public goods in nature and the private sector will not be able to capture all the benefits, especially when access to certain products and services cannot be excluded. As regards plantations, when the main focus is on the production of a marketed commodity, there is very little justification for the government to take a lead role, unless there are valid reasons. In the Southern African context the following issues seem to be critical as regards privatisation:

- Resolution of land ownership issues is critical to encourage private sector involvement. This is being attempted to be overcome through leasing forest land on a long term basis involving no outright transfer of ownership of land but only the right to grow and harvest trees. Another approach that has been found effective is partnership arrangements with local communities through out-grower schemes under which private industry encourages land-owners to grow trees, providing necessary technical and other support services and agrees to purchase wood at mutually agreed rates.

- Privatisation doesnot imply a complete abdication of responsibility by governments. It is important that government provides a level playing field and establish appropriate systems for resolution of conflicts. This would require development of necessary guidelines and procedures.
- The issue of private sector involvement in plantation forestry research needs to be assessed taking into account the potential for combining the comparative advantages of the private and public sectors.

Current and potential markets:

37. Presently the timber industry in the sub-region is largely dependent on external markets, notably in Europe and Asia and the market within the region has considerable potential considering the growth in population, income changes and the current low levels of consumption especially for paper and paper products. With the anticipated growth in literacy levels, there is considerable scope for increased consumption of writing and printing paper. Some of the issues that need to be considered in assessing the long-term market prospects of forest products are:

- Southern Africa is close to emerging markets in Asia, but the ability to benefit from this depends on the competitive advantage in comparison with other emerging wood producers;
- South African timber industry has adopted certification as an important means of maintaining its markets in Europe. However, certification may be less important at least for some time until the consumers in the emerging markets clearly indicate preference for certified timber. It was noted that current costs of certification are very high and many small growers will not be able to meet the additional costs of certification;
- Marketing of non-wood forest products: There is a need to consider the potential for domestic and external demand for several of the non-wood forest products, especially medicinal plants, and other products. It was noted that trade of medicinal plants is increasing rapidly, although no effort has been made to quantify the volume and value of trade. Concern was expressed that this would lead to depletion of resources and more particularly benefits from the increased volume of trade largely accrues to the traders and other intermediaries and not to the rural producers and collectors. In assessing the long term potential for non-wood forest products, it is important to consider the scope for value addition through processing, quality control and improved packaging.
- It was noted that wooden curio items are emerging as an important item and already this is a well developed sector in countries like Namibia, Botswana and South Africa. The long term prospects of this need to be considered, especially taking into account of the growth of the tourism sector.

38. Plantations have considerable potential for producing non-wood forest products and integrating this would to some extent help to overcome the negative reaction to private sector control. As such privatisation gives an impression of total exclusion of local communities. Ensuring that local communities are able to continue to derive direct benefits from the area is necessary to avoid some of the negative perceptions relating to privatisation.

Water and forest management:

39. Water supply constraints in Southern Africa requires specific consideration in the context of assessing the potential of expanding the forest plantation programme. In areas of water deficit plantations will have to meet the costs of water use. The outlook study should specifically take into account the varied impacts of natural forests and plantations on water availability. It was noted that in certain areas, no further expansion of the plantation programme will be feasible on account of limited water availability.

Financing sustainable forest management:

40. Forest plantations should be financed in a self-sustainable manner and it was noted that with improved management, especially focused on enhancing productivity, most industrial plantations could be financed from their income. However, when plantations are to meet specific social objectives – providing rural employment, meeting local energy needs, etc. – this may result in rates of returns that may be less than what is required to make them commercially viable. It is important that these considerations are explicitly taken into account, quantified and necessary support provided by the public sector to ensure that there is sufficient investment flows.

Wildlife management:

41. It was noted that in the context of Southern Africa, eco-tourism linked to wildlife management could be a potentially important use of the less productive areas. There is however need to ensure that benefits from this accrue to the local communities. It was noted that the current focus of wild-life based tourism centered on national parks and other game reserves need to be broadened to cover wildlife outside such designated areas. Realising the potentials however depends on a number of factors including a strategy for marketing as also improving access and other infrastructure.

Wood energy:

41. Much of the wood fuel production takes place in the unorganized sector and hence it is difficult to obtain reliable information on the extent of use, long term trends in consumption and sustainability. Also this has resulted in lack of any significant efforts towards technological improvements. Benefits from the unorganized sector largely accrues to the intermediaries, involved in transporting and distributing the products like charcoal. It was noted that:

- Wood will continue to be the most important source of house hold energy supply including in the rural areas.
- Commercial sources of energy is unlikely to become widely used and it cannot be expected that they will replace wood in the foreseeable future; in many cases increasing cost of commercial energy has resulted in reverse substitution, under which people have switched back to wood and charcoal.
- Other renewable sources of energy like solar and wind are not likely to be widely available considering that even if the technology is perfected, it will take considerable time to make it widely available.
- Products like industrial charcoal seem to have long term potential and detailed assessment of the potential should be examined.
- There is an urgent need to improve the technology for wood energy production considering the fact that wood is unlikely to be replaced as the most important source of energy.

Field visit

42. The Department of Water Affairs and Forestry in collaboration with CSIR organized a field trip to the Johannesburg Waterworks, specifically focusing on treatment of sewage and its use in forest plantations. The waterworks handles about a third of the Johannesburg's sewage and is located in a farm called Bovelder. Wood blocks (chips 5x 1 cm) are used to accelerate the drying and oxygenation of the sludge and then it is disposed in a series of trenches, in between which trees are planted. The main species planted are Eucalyptus, mulberry and poplars. The visit demonstrated how more environmentally acceptable waste disposal system could be developed and the potential for using sewage sludge in urban and peri-urban tree planting.

Issues emerging from the Asia-Pacific Study

43. Mr. Hennie Coetzee, Member of the FOSA Expert Advisory Group, made a presentation focusing on the salient findings of the Forestry Sector Outlook Study for Asia and the Pacific and the relevance of them in the context of FOSA. Of particular relevance to FOSA include the following:

- Economically Asia Pacific has a number of fast growing countries, whose demand for wood and wood products are expected to increase considerably. With a population of about 3 billion, the purchasing power is enormous and this would provide new markets for products from Africa; However, very few of the consumers will be willing to pay a premium for certified and labelled timber; While the production and consumption of sawn timber is expected to stagnate, the consumption of paper and panel products is expected to grow rapidly ;
- The demand on forests in the region is extremely diverse. All the indications are that the services functions of the forests, especially watershed protection, eco-tourism, etc. are gaining in importance;
- The non-wood forest products sector has been registering a rapid growth. Asia Pacific accounts for nearly 40% of the world's NWFP exports;
- While collection of NWFPs from natural forests is expected to decline, commercially important ones will be increasingly produced through large scale cultivation;
- Demand for wood energy will continue to grow and although there will be no deficit on an aggregate level, unequal distribution and accessibility will result in local shortages; Almost 2/3rd of fuelwood will be obtained from farm lands rather than forests;
- With the increasing reliance on plantations for producing industrial round wood, the size of the logs will continue to decline and this will necessitate considerable changes in the technology of processing; Recycling and the use of waste paper will increase in the paper industry.

Issues relating to Outlook Methodology

44. Mr. C.T.S. Nair made a presentation on some of the issues relating to the outlook methodology, specifically emphasizing on the need to consider factors outside the sector. Specifically the presentation highlighted the following issues:

- Changes during the last three decades have been rather unprecedented and one should expect a more rapid pace of change during the next 20 years; Many of the changes will be rather unpredictable;
- Forestry sector has been influenced by a variety of factors, including economic, institutional, technological and environment related changes. Often the changes are not gradual but quantum jumps, on account of the combined effect of a number of factors;
- For a better understanding of what is likely to happen in the forestry sector, it is important to assess the potential structural changes in the economy, specifically focusing on the changing roles of the different sectors. As long as the dependence on land continues and the technological capability doesnot improve, deforestation is unlikely to slow down.

Outline for the Sub-regional Report

45. Mr. Mike Chihambakwe, the FAO Sub-regional Consultant presented the draft outline of the FOSA sub-regional report for Southern Africa. The proposed contents of the report were discussed, but it was pointed out that this is primarily to provide an initial framework and as the report is developed, the framework will have to be adapted to accommodate specific issues that may become apparent.

Recommendations and follow up

46. Arising from the country papers and group discussions, the key issues that emerged as common and needing focus in drawing up the sub-regional report have been highlighted under Group discussion. In drawing up the report, it had to reflect the position and real key issues in the region.

47. As the report is developed, continuos contact needs to be maintained with the national focal points for clarity and guidance on a number of issues as necessary. It was agreed that as and when additional information is required, country focal points would be contacted.

48. The country focal points will take into account the discussion and where necessary revise the country outlook paper. This should be made available by end of February 2001. Efforts to obtain draft country papers from those countries yet to provide them will be continued.[1] Country focal points were also provided with a tabular statement on 'Characteristics of the present and future forestry situation" requesting this to be competed and returned to the sub-regional consultant.

49. The sub-regional consultant will maintain regular interaction with the country focal points and maintain the networking that has been initiated. Further, the sub-regional consultant will start working on the draft sub- regional report under the guidance of FAO Rome and the Regional offices in Accra and Harare. The methodology meeting planned in Rome in February 2001 will help to provide clarity to the approach and to bring cohesion with the effort of preparing sub-regional reports in other sub-regions. A third round of meeting of the national focal points is scheduled when the draft sub-regional report is ready[2]. This will be the final opportunity to discuss issues relating to the regional and sub-regional outlook and to improve the main FOSA products.

Concluding Session

50. Mr. Themba Simelane chaired the concluding session and thanked the participants and FAO on behalf of the Department of Water Affairs and Forestry. On behalf of FAO, Mr. Peter Lowe thanked all the participants, the Department of Water Affairs and Forestry and the FAO Representation.

[1] Since the Workshop in Pretoria, draft country outlook papers have been received from Botswana and Lesotho.
[2] This is now provisionally scheduled to be held during September 2001.

ANNEX I

AFRICAN FORESTRY AND WILDLIFE COMMISSION

FORESTRY OUTLOOK STUDY FOR AFRICA (FOSA)

TECHNICAL WORKSHOP FOR SOUTHERN AFRICA, 16 – 18 JANUARY 2001

Venue: Capital Protea Hotel, Pretoria, South Africa

Agenda

Monday 15 January 2001

- Arrival of participants.

Tuesday 16 January 2001

0830 – 0900: Registration

0900 – 1000: Opening Session

CHAIRPERSON: MS. Lael BETHLEHEM

- Welcome address (Ms. Lael Bethlehem)
- Statement by FAO (Ms. F. Chenoweth)
- Statement by SADC (Mr. M.Ngulube)
- Briefing on the progress of FOSA (Mr. Peter Lowe)

1000 – 1030: Coffee break

1030 – 1230: Presentation of FOSA country outlook papers and discussion
- Namibia (H. Kojwang)
- Malawi (S. Kainja)

1230 – 1400: Lunch

CHAIRPERSON: Harrison KOJWANG

1400 - 1530: Presentation of country outlook papers and discussion
- Mozambique (Eurico G. Cruz)
- Swaziland (S. Gamedze)

1530 - 1545: Coffee break

1545 – 1645: Presentation of country outlook papers and discussion
- Zambia (Anna Chileshe)

1645 – 1745: Discussion of key issues relating to the forestry outlook in Southern Africa

1830: Reception hosted by FAOR (Capital Protea Hotel)

Wednesday 17 January 2001

CHAIRPERSON: Ms. Anna CHILESHE

0830 – 1015: Presentation of country outlook papers and discussion

- South Africa (T. Simelane)
- Zimbabwe (E. M. Shumba)

1015 – 1030: Coffee break

1030 – 1130: Briefing on outlook methodologies

- Lessons from the Asia Pacific Forestry Sector Outlook Study (Hennie Coetzee)

1130 – 1230: Lunch

1330 – 1800: Field Trip

Thursday 18 January 2001

CHAIRPERSON: Mr. Solomon GAMEDZE

0830 – 0930 : Forestry outlook study for Africa: Issues in outlook methodologies (C.T.S. Nair)

0930 - 1030: Issues relating to future development of forestry in Southern Africa (Group Discussion)

- Working group discussion on selected topics

1030 – 1045: Coffee break

1045 – 1230: Group discussion (Contd.)

- Working group discussion on key issues
- Presentation of findings

1230 – 1400: Lunch

CHAIRPERSON: Mr. Renny MADULA

1400 – 1500: Provisional outline of the FOSA Southern Africa Outlook Report

- Presentation of the draft outline
- Discussion

1500 – 1530: Follow up action

- Finalisation of country outlook reports and sub-regional reports
- Networking of FOSA focal points

CHAIRPERSON: Mr. Themba SIMELANE

1530 – 1600: Closing session

- Statements by organizers
- Vote of thanks

Friday 19 January 2001

- Departure of participants

ANNEX II

FOSA TECHNICAL WORKSHOP FOR SOUTHERN AFRICA
PRETORIA, SOUTH AFRICA
16 – 18 January 2001

LIST OF PARTICIPANTS

Country	Name and contact address
Malawi	**Mr. S. KAINJA** Acting Deputy Director Planning, Training and Research Forestry Department, PO Box: 30048 Lilongwe 3, MALAWI Tel: 265-771 000 Fax: 265-774-268 E-Mail: skainja@malawi.net
Mozambique	**Mr. Eurico Guerreiro CRUZ** National Directorate of Forestry & Wildlife (DNFFB) Ministry of Agriculture, PO Box 1406 Placa Dos Herois Mocambicanos Maputo, MOZAMBIQUE Tel: 258-460-036 Fax: 258-460060 E-mail: floresta@dnffb.imoz.com
Namibia	**Dr. Harrison Ochieng KOJWANG** Director of Forestry Ministry of Environment and Tourism, PMB 13346 Windhoek, NAMIBIA Tel: 264-61-221-478 Fax: 264-61-222830 E-mail: kojwang@forestry.met.gov.na

South Africa	**Ms. Lael BETHLEHEM** Chief Director: Forestry Department of Water Affairs and Forestry Private Bag X 93 Pretoria 0001 South Africa Tel: 27-12-336-7734 Fax: 27-12-328-6041 E-mail: lael@dwaf.pwv.gov.za **Dr. Themba SIMELANE** Director: Forest Policy Department of Water Affairs and Forestry Private Bag X 93 Pretoria 0001 South Africa Tel: 27-12-336-7734 Fax: 27-12-328-6041 E-mail: themba@dwat.pwv.gov.za **Mr. Renny MADULA** Department of Water Affairs and Forestry Private Bag X 93 Pretoria 0001 South Africa Tel: 27-12-336-7383 Fax: 27-12-323-7054 E-mail: 1af@dwaf.pwv.gov.za **Ms. Sebueng KELATWANG** Department of Water Affairs and Forestry Private Bag X 93 Pretoria 0001 South Africa Tel: 27-12-336-7734 Fax: 27-12-328-6041 E-mail: 1af@dwaf.pwv.gov.za **Mr. Fred J KRUGER** Consultant to Department of Water Affairs and Forestry 22 El Sol 73 Johnson Street Sunnyside Pretoria 0002 South Africa Tel: 27-12-343-6167 012-3437773 E-mail: fkruger@global.co.za
Swaziland	**Mr. Solomon T. GAMEDZE** Senior Forestry Officer Forestry Section Ministry of Agriculture and Cooperatives PO Box 162, Mbabane SWAZILAND Tel: 268-404-6361/404-9229 Fax: 268-404-4700/4041547 E-Mail: fplp@iafrica.sz

Zambia	**Ms. Anna CHILESHE** Director of Forestry Forestry Department Ministry of Environment and Natural Resources PO Box: 50042 Lusaka, ZAMBIA Tel: 260-1-226-131 Fax: 260-1-226131 E-Mail: forestry@zamnet.zm
Zimbabwe	**Dr. E.M. SHUMBA** General Manager Forestry Commission, PO Box HG 139 Highlands, Harare, ZIMBABWE Tel: 263-4-49308736 Fax: E-Mail: frchigh@internet.co.zw

Food and Agriculture Organization	**Mr Michael CHIHAMBAKWE** FOSA Sub-regional Consultant, ENCON Associates P O Box BW 1061, Borrowdale Harare, ZIMBABWE Tel: 263-488-5208 Fax: 263-4885-208 E-mail: mchihambakwe@hotmail.com **Mr Hennie COETZEE** Member of FOSA Expert Advisory Group (EAG) P O Box 519, Little Brak River 6503 George, South Africa Tel: 27-8241-06108 Fax: 27-44-6966066 E-Mail: hbc@mweb.co.za **Mr. Michel LAVERDIÉRE** Forestry Officer, FAO Sub-Regional Office for Southern Africa Old Mutual Centre, Cnr. Jason Moyo Avenue/Third Street P O Box 3730 Harare, ZIMBABWE Tel: 263-4-253655 Fax: 263-4-700724 E-Mail: Michel.Laverdiere@fao.org **Mr. Peter LOWE**, Forestry Planning Officer, FAO Regional Office for Africa P O Box 1628 Accra, GHANA Tel: 244-051 Fax: 244-078 E-Mail: Peter.Lowe@fao.org **Mr C.T.S NAIR**, Senior Forestry Officer, Forestry Policy and Planning Division Forestry Department FAO, Rome, ITALY Tel: 39-06-57055346 Fax: 39-06-57055514 E-mail: cts.nair@fao.org **Ms. Florence A. CHENOWETH** FAO Representative for South Africa Metro Park Building PO Box: 13782, The Tramshed 0126 Pretoria, SOUTH AFRICA Tel: 27-12-3385335 Fax: 27-12-3207606 E.Mail: fao-zaf@fao.org

SADC –FSTCU	**Mr Mzoma NGULUBE** Head SADC-FSTCU Forestry Headquarters, P O Box 30048 Lilongwe 3, Malawi Tel: 263-771-000 Fax: 263- 771-812/774-268 E-mail: mngulube@sdup.org, MW/SADCFSTC@malawi.net

ANNEX III
FORESTRY OUTLOOK STUDY FOR AFRICA (FOSA)

SOME KEY ISSUES FOR DISCUSSION IN THE CONTEXT OF IDENTIFYING FUTURE SCENARIOS OF FORESTRY DEVELOPMENT IN SOUTHERN AFRICA

Issues relating to ownership of land ownership and tenure:

- What are the impact of land reforms on forest cover?
- How can forestry institutions influence the changes in a favourable way to ensure that land reforms donot undermine the productive and protective functions?
- Impact of tenure on tree resources, especially in communal land.
- Impact of policies in other sectors and their implications on forest land.

Changing markets:

- What are the changes in markets for industrial wood from Southern African countries and what could be the possible direction of change considering the changing global economic situation?
- Can we expect a significant increase in domestic market in Southern Africa or will it be primarily in other countries?
- What are the potential comparative advantages for Southern African wood industry to compete in the global market?
- What are the factors that will encourage widespread use of certification and are these factors likely to become important in the next two decades?
- What are the trends with regard to the emergence of markets for non-wood forest products within Southern Africa and outside?
- What should be done to ensure remunerative prices to the producers of non-wood forest products and to ensure that production is sustainable? How should we ensure stability of supply and prices?

Water and forest management

- How do we resolve the conflicts in water management in the context of the increasing demand for water in Southern Africa?
- What are the issues relating to compensation for maintaining water catchments ?

The future of plantation forestry in Southern Africa:

- What are the potentials and constraints for the emergence of Southern Africa as an important region as regards plantation forestry?

- Which are the countries with potential for developing plantation forestry taking into account land availability, water constraints, accessibility, integration with industries, etc.

- What are the present comparative advantages and are they likely to change during the next two decades?

- Which are the potential markets for Southern African forest based industry? What are the emerging scenarios in the context of changing direction of trade?

- What is the extent of integration/ linkages of forest based industries in the Southern African countries?

- What is the potential of plantations in creating rural employment and income?

- What are the probable models for plantation development in the Southern Africa? How could these address the social and environmental issues?

Privatisation in forestry

- Many countries in Southern Africa are bringing about institutional changes in forestry, especially through enhancing private sector involvement. Privatisation of forest plantations under the forest departments has been pursued in a number of countries. What are the conditions under which privatisation could enhance investment in forestry?
- What are the options to resolve land ownership disputes in some of the countries in the context of privatisation?

Potentials and constraints of wild-life based tourism:

In a number of countries, eco-tourism centred on national parks, game reserves and other forests has emerged as an important activity and the tourism industry including eco-tourism is one of the fastest growing sectors globally. In this context :

- What are the long-term potentials for eco-tourism in Southern Africa and will the region be able to capture a substantial share of this growing industry? What are the unique features of the Southern Africa that could provide a comparative advantage?
- What are the conditions under which eco-tourism could become an important activity?
- In many countries benefits from the growth of eco-tourism has not benefited local communities. What are the options to ensure that the local communities benefit from the growth of the sector?

Changes in wood energy use and its implications on forestry

We have been pursuing various options with regard to enhancing energy supplies, but there has been no change and the situation has deteriorated during the last 10 years:

- Will there be any significant shifts from wood fuel to other sources of energy? Are there any promising alternatives?
- Given such a scenario what are the options available for future?
- Will there be increasing commercialisation of wood fuel to encourage public and private investment in wood fuel plantations?

Institutional changes:

- What is the direction of changes with regard to the capacity of forestry institutions? Are we likely to see significant improvement in the situation?
- What are the impacts of decentralisation of forest administration?

Empowerment:

- Will there be increased participation of women in forest and tree resource management? What are the general trends? And what will be the impact of this on conservation of forest resources?

Cross-sectoral policies:

- What are the impacts of national financial, trade and investment policies on the forestry sector?
- How does corporate policies of major wood (and other) industry firms affect the forestry sector in Southern Africa?
- In what way environmental policies (including EIA) will impact on forestry?

Financing of sustainable forest management:

- What are the options for financing sustainable forest management in Southern Africa?

- Are there any innovative means for financing sustainable forest management?