

# REGIONAL WORKSHOP ON

# Medicinal Plants & Traditional Medicine in Africa

Cape Town, South Africa, 14 - 18 April 1998

## PROCEEDINGS



IDRC  
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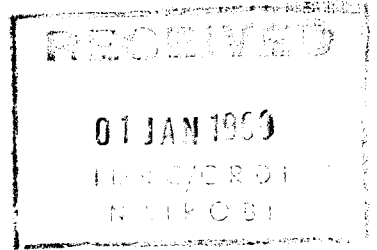


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Ernest Rukangira

# REGIONAL WORKSHOP ON MEDICINAL PLANTS AND TRADITIONAL MEDICINES IN AFRICA

## PROCEEDINGS



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*organized jointly by*  
Environment Liaison Centre International (ELCI) Nairobi, Kenya  
*and*  
International Development Research Centre (IDRC) Nairobi, Kenya

*with support from*  
**IDRC and DANIDA**

in collaboration with Traditional Medicine System Organization (TRAMSO) and  
the School of Pharmacy of the University of Western Cape, South Africa.

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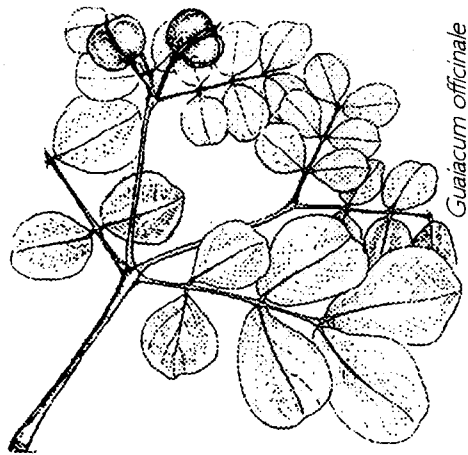
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Workshop  
Participants.





*Guaiacum officinale*

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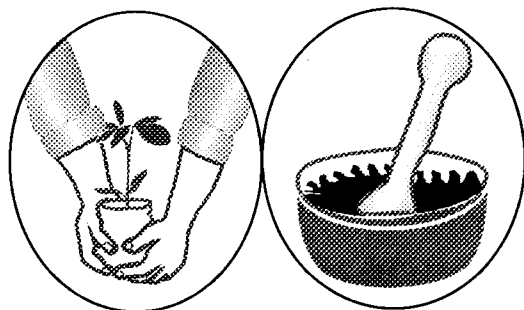
***Ernest Rukangira***



# ACRONYMS

- CBD** : Convention on Biological Diversity
- CBOs** : Community Based Organisations
- DANIDA** : Danish International Development Agency
- ELCI** : Environment Liaison Centre International
- IDRC** : International Development Research Centre
- IPR** : Intellectual Property Rights
- MPLC** : Medicinal Plants and Local Communities
- NGOs** : Non-governmental Organisations
- OAU** : Organisation of African Unity
- PIC** : Prior Informed Consent
- R & D** : Research and Development
- TMPs** : Traditional Medicine Practice  
: Traditional Medicine Practitioners
- TRAMIL** : Traditional Medicine in the Islands
- TRAMSO** : Traditional Medicine System Organisation
- UNDP** : United Nations Development Programme
- UNESCO** : United Nations Educational, Scientific and Cultural Organisation
- WHO** : World Health Organisation
- WWF** : World Wide Fund for Nature
- ZINATHA** : Zimbabwe National Traditional Healers Association





## **I** Introduction

Over the years, the importance of specific plant species for primary health care has received some recognition from official authorities and policy institutions. This acknowledgement has been extremely vital in efforts to conserve medicinal bio-diversity. But the preservation of such plants has depended mainly on how indigenous and local communities have treated ecosystems in general. In fact, traditional healers have not only directed much of their attention to plants of direct medicinal relevance, but also to the conservation of adjoining areas where non-medicinal species grow. The health and diversity of plants in surrounding areas is crucial in providing cover for medicinal plants. As such, bio-diversity conservation has largely been an integral part of healing activities. The collective wisdom on bio-diversity conservation has been embodied in the cultures of indigenous peoples and passed on from generation to generation. While international efforts have concentrated on issues of bio-conservation in developing countries, no formula has been devised to compensate local communities for the genetic resources which they helped to conserve and which have led to significant pharmaceutical spin-offs for industrialised countries.

The international community is sharply divided over the issue of compensation. While there is widespread recognition of the paramount role traditional communities have played in conservation, global efforts tend to gloss over the most crucial factor in the conservation process: the fundamental rights of indigenous peoples and local communities. In view of these facts, it is clear that conservation of medicinal bio-diversity requires immediate policy and legislative support. As such, recognition of indigenous and local knowledge systems should be accompanied by the establishment of incentive-based programmes capable of stimulating genetic resource conservation.

In Africa, more than 80% of the continent's population relies on plant and animal based medicines to meet their health care requirements. For the most part, the plants and animals used in traditional medicine are collected from the wild, and in many cases, demand far exceeds supply. As Africa's





population grows, demand for traditional medicines will increase, and pressure on natural resources will become greater than ever. African plants are also valued in selected markets around the world. The growing demand for natural cosmetics, and herbal and prescription medicine, has resulted in significant imports of wild plants to developed countries. At the same time, very little information exists on the local knowledge pertaining to bio-diversity conservation and management and on the identity of many species in trade, the volumes traded and the impact of harvest. A 1993 UNESCO/WWF reference on the use of medicinal plants in Africa reiterated the urgency of this situation by noting that there is a significant evidence to show that the supply of plants for traditional medicine is failing to meet demand. The International Development Research Centre (IDRC), the United Nations and the Organisation of African Unity (OAU) have acknowledged the contribution of local and indigenous knowledge in natural resource management strategies. In this context, the current efforts to record, document, and make knowledge systems accessible seek to shape further the cultural dimension of development from the points of view of different disciplines. There is an urgent need for international co-operation and coordination to establish medicinal plants conservation programmes to ensure that adequate supplies are available to future generations.

Traditional medicine has been described by the World Health Organisation (WHO) as one of the surest means to achieve total health care coverage of the world's population. In spite of the marginalisation of traditional medicine in the past, the attention currently given by governments to widespread health care has given a new drive to carry out research, invest in and design traditional medicine programmes in several developing countries. Medicinal plants deserve special attention because they are of great value in averting or treating common illness. Their conservation also means retention of indigenous and local knowledge associated with their unique properties and correct application. There is a need for a local and global exchange of information as a means of educating communities about medicinal plants and their conservation and utilisation. By raising awareness among local communities about the value of local medicinal plants and by appropriate interventions for conservation and use, sustainable conservation of medicinal plant bio-diversity can be achieved at the village level.

Because of the high cost of imported drugs, many African health ministries are now encouraging the use of local medicinal plants in order to give underprivileged populations a safe alternative to primary health care, and have established departments of traditional pharmacopoeia to implement this policy.

In Africa, traditional medicine has developed to such a level that it is now an established system of medicine upon which a good part of the population depends. Medicinal plants are a highly significant component of Africa's biological diversity. They are the base on which traditional medicine, as practised in Africa, rests. This base is under threat due to loss of habitat, increased collection, and the absence of any concerted effort to increase





the populations of medicinal plant species. The full exploitation of medicinal plants must be seen as part of the larger need for socio-economic development, the improvement of the health care system, and the preservation of a natural resource base for sustainable use in the future.

The possible uses of African medicinal plants to treat various conditions have been widely documented. However, knowledge regarding the stage at which plants provide the best material, the locations where they are available, how they may be harvested with minimal destruction, etc., are not clearly found in the manuscripts. If this knowledge dies with elderly practitioners, it may in fact be lost for ever.

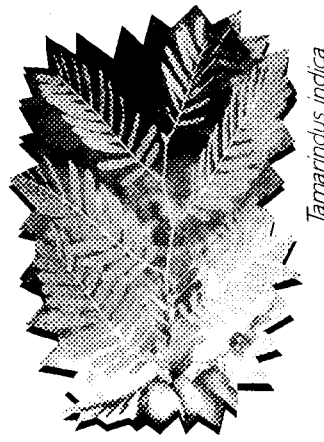
The regional workshop on Medicinal Plants and Traditional Medicine in Africa, held in Cape Town, South Africa, was organised jointly by the Environment Liaison Centre International (ELCI) and the International Development Research Centre (IDRC), Nairobi, Kenya with the collaboration of the Traditional Medicine System Organisation and The School of Pharmacy of the University of Western Cape, South Africa. The workshop was organised in the framework of the regional medicinal plants and local communities project which was initiated by ELCI with support from IDRC and DANIDA.

The goal of this project is to encourage the conservation of bio-diversity by helping local communities make the best possible use of their knowledge and their practices regarding local medicinal plants. As the forest areas continue to decline throughout the region, it is likely that the availability of some medicine plants will also decline. It is also not clear whether these losses will be compensated for by cultivation, or whether substitutes will be found. It is within this context that the project will promote community protection, cultivation and sustainable utilisation of medicinal plants. In the long-term the project seeks to assist local communities to understand the necessity of sustainable use of biological resources by reinforcing indigenous know-how and developing appropriate incentives, tools and methodologies to enable them to benefit from their knowledge and practices. The MPLC project is implemented in the framework of ELCI's 3-year workplan on indigenous knowledge, medicinal plants and bio-diversity. This programme is carried out through an established Working Group on indigenous knowledge and bio-diversity.

The organisation of the regional workshop also fits in the context of the IDRC Working Group discussions on Medicinal Plants, aimed at identifying crucial needs and priorities of developing countries in the area where IDRC support would be focused.

This workshop was the second in a series of workshops organised by ELCI and IDRC designed to identify needs and priority actions in medicinal plants and traditional medicine in Africa. A similar workshop was organised in Conakry (Republic of Guinea, West Africa) for NGOs, researchers and traditional healers from African francophone countries, held from 17- 21 November 1997.





# Workshop Objectives and Methodology

The workshop brought together a multi-disciplinary group of about 55 representatives from environmental NGOs, grassroots organisations, research institutions, universities and governments from African anglophone countries. Participants included researchers, health professionals, traditional and modern physicians, traditional practitioners, herbalists and representatives of environmental NGOs. The workshop was held over a four day period and divided into a number of distinct sessions which provided room for discussion and sharing of the lessons from the papers presented at the workshop. The participants were divided into thematic working groups to review specific topics in detail and come up with priority actions and recommendations.

The objectives of the workshop were as follows:

- to provide a forum for exchange of experiences and review progress on sustainable use and conservation of medicinal plants and on traditional medicine practices in Africa;
- to identify gaps, constraints, needs, and priorities in the context of Research and Development (R & D);
- to develop an outline of a plan of action for promotion and development of medicinal plants and traditional medicine in Africa in the context of R & D;



- to examine mechanisms/strategies and tools for international and regional co-operation in medicinal plants and traditional medicine.

Topics addressed by the workshop participants were:

- Protection and conservation of medicinal plants and traditional knowledge and implementation of article 8(j) of the Convention on Biological Diversity (CBD)<sup>1</sup>;
- Participatory research and involvement of local communities and traditional healers;
- Development of standardised processes and protocols for research on new drugs and for production of plant derived drugs and development of traditional medicine industry;
- Integration of traditional medicine in public health systems;
- Important cross-cutting issues such as: regional and international collaboration and co-operation, policy pertaining to ownership, access and conservation, gender, legislation, trade, IPR, compensation and benefit sharing were also addressed in all workshop topics.



Dr. François Gasengayire from IDRC presented an introductory paper on "Medicinal Plants and Traditional Medicines in Africa: Review of activities, needs, challenges and perspectives". The paper highlighted a number of activities and projects related to the issue and funded by IDRC in Africa. It also gave an overview of institutions (NGOs, international organizations research, academic, etc.) and their activities in the area of medicinal plants and traditional medicine in Africa. The paper presented pressing problems, needs and recommendations for short and medium term for consideration to promote and develop the sector in Africa.

The workshop examined the topics highlighted above by considering the link between medicinal plants and traditional medicine needs/objectives and

#### <sup>1</sup>Article 8 (j) of the CBD

"Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices".



priorities identified, user orientation, financing and integration of traditional medicine in health planning at the research, institutional and policy level. The mixture of delegates from different institutions, countries and backgrounds helped to ensure that practising research scientists and NGO representatives were able to increase their understanding of the need for priorities and focus. At the same time, traditional healers became familiar with research time horizons, and regulatory and technical issues specific to traditional medicine. The representation of diverse interests and institutions was seen as the foundation for the effective implementation and execution of follow-up actions and in-country implementation of the workshop findings. Each participant was invited to prepare and present a paper.

The plenary sessions were mainly devoted to keynote speeches, paper presentations, discussion and feedback from working groups. Working group findings for the thematic issues (*round table discussions*) were presented in the plenary sessions.

Discussion was preceded by two theme presentations by selected participants, followed by two to three support presentations from those participants who had prepared papers on subject areas falling within these thematic areas. These presentations were used to derive discussion points that provided a basis for the identification of issues for consideration during group work sessions. Group work sessions were then followed by plenary sessions where the deliberations from the groups were presented. Plenary sessions were also used to identify common interests among participants on each thematic area.



*Hibiscus Esculentus (Malvaceae)*





*Hibiscus Esculentus*



## *Opening Session*

Ilse Marks, on behalf of ELCI, welcomed participants. She acknowledged the contribution of DANIDA and IDRC that made this workshop a reality. She thanked the Traditional Medicine System Organisation (TRAMSO) and the School of Pharmacy of University of Western Cape and Breakwater Lodge for local arrangements. Ms. Marks reported that ELCI aims to build the capacity of NGOs and CBOs to work together. To make its work more effective ELCI organises its membership into issue based working groups. ELCI members working on similar issues but at different levels come together to tackle common problems and constraints from different angles. Each working group develops an action plan with three main components: advocacy, local support, networking and information exchange. One such working group covers indigenous knowledge and bio-diversity composed of 150 NGOs and other institutions world-wide. The MPLC project is one of the activities of this working group.

She said that the main objective of the project is to promote bio-diversity conservation by helping local communities to make the best possible use of their knowledge and practices regarding local medicinal plants. She also noted that this workshop is the second in a series of workshops organised by ELCI and IDRC designed to identify needs and priority actions in medicinal plants and traditional medicine in Africa. The first workshop was held in Conakry (Guinea) in November 1997. She added that in South Africa, the MPLC project is implemented through ELCI member Traditional Medicine System Organisation (TRAMSO), based in Cape Town, who has played a leading role in local organisation of this workshop.

In his opening remarks Dr Serge Dubé, on behalf of the International Development Research Centre noted that IDRC provides funds and expert advice to developing country researchers who conduct research to identify long term, practical solutions to pressing development problems. IDRC



provides funds to enable researchers to improve their skills. It helps them build contacts with each other and with others who are interested in the results of their research. He pointed out that activities in the field of traditional medicine and medicinal plants are conducted under the Sustainable Use of Biodiversity Program Initiative, the goal of which is to enhance the capacity of local and indigenous peoples to protect, access, and sustainably use biodiversity and to enhance the knowledge of bio-diversity. It places particular emphasis on the gender aspects of conservation and sustainable use. To reach this goal, the initiative supports multi-disciplinary research that focuses on enhancing the sustainable use of bio-diversity by local communities. He added that it is within this context that IDRC jointly with other donors support the Medicinal plants and local communities project which is being implemented by ELCI at the African region level.

**Welcoming Speech by Professor P.F.K. Eagles,  
Head of the Department of Pharmacy of the  
University of Western Cape**

**W e l c o m e**

We are very honoured by your presence and your selection of SA as a venue for this annual workshop. We, like you, share a great interest in the field of Traditional Medicines. We are concerned about the entire spectrum of activities which make up Traditional Medicine. The actual medicines, we know, are regarded as only a part of the entire healing process but they form a very important part in the healer's armamentarium.

We are also happy to see such a wide spectrum of stakeholders from so many disciplines here today, both from within and from outside the country's borders. This as you know is relatively new to us in our young democracy.

Traditional medicines are being addressed at many levels in the country ranging from parliamentary committees set up to deal with this topic to universities to private individuals and companies, all having substantial interests in this area. Many government departments are tackling the issue of traditional healing and medicines. These include the departments of Health, Agriculture, Arts, Culture Science and Technology and Tourism who are all players in this arena. Over the last year the Dept of Health has assumed the role of co-ordinating activities in the research and practice areas. It has established a National Reference Centre-approach to traditional medicines which translates to establishing a forum at national level where all the role players meet and bring their issues to the table for consideration and information by and for others. This has so far proved to be quite successful as the awareness of many in-house issues in these departments are now known by others from outside their departments. This process has been enabled by the country's drug policy which, although it deals specifically with the medicines, is not done in a manner which suggests that the healing process is disregarded. The latter is addressed in various other fora in the country. For example the Medicines Control Council of the country has established a



Complementary Medicines Committee which has, so far, 9 sub-committees dealing with various complementary medicine systems including Chinese, African, Ayurvedic medicine and Homeopathy. Here the quality and safety of medicines are addressed along with their scheduling of use. The latter involves recommendations about their use; under the supervision of the practitioner or not. In this process the actual practitioners from these systems of medicine have been elected and appointed to the individual sub-committees to deliberate on pertinent matters.

The Drug Policy of SA was launched in January 1996 and has had much support from Minister Zuma and the department of Health and effectively is the macroplan on acquisition, production, education and use of these medicines. Other support from national funding organisations include: In Cape Town the Medical Research Council has funded a nucleus of a national research initiative based at the School of Pharmacy at the University of the Western Cape and at the Department of Pharmacology at University of Cape Town called the South African Research Group on Traditional Medicines and its mission is to develop the research thrusts in the traditional medicines arena. Much research and development of human resources is taking place in the Group. Amongst others the following projects are in process: at UCW our research thrust is to scientifically monograph medicinal plant drugs and collate the findings as a South African Traditional Medicines Pharmacopoeia, and at UCT much work is going into the treatment of malaria using certain traditionally used plants and their components. The ultimate goal is to network all the SA players in research such that there is as more efficient use of all resources both human and material and infrastructural. Our country, like many of yours, is too small to afford the luxury of many initiatives developing in an uncoordinated way. In SA millions of rands are currently being and are on the point of being spent in this area of research. So this workshop comes at an opportune time for you and especially for us in SA as it can certainly help us to develop our plans and allow us to more speedily get a strategy on the table for research, for funding and for full involvement of all the stakeholders, especially the communities. For too long communities have not really been considered as true players in traditional healing. However, I am pleased to see that your agenda firmly deals with this issue.

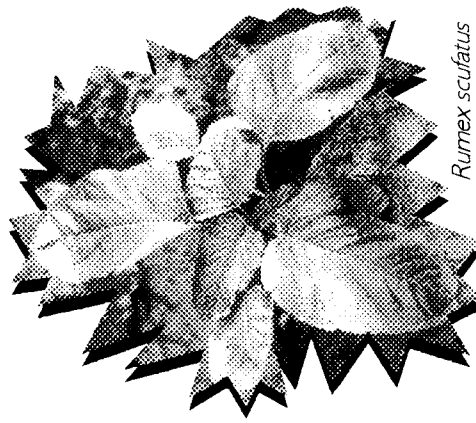
The funders IDA and others must be commended on their funding of the activities which have led to the workshop, for the workshop and also for those activities that will follow the workshop. We, like you, feel that there should be a healthy mix of all the role players in all initiatives in traditional medicine, otherwise all the good will and political will come to nought.

I wish you well for the workshop and wish to welcome you to visit our campus at UCW if you have time. I also wish to thank Tdr Isaac Mayeng for his part in the organising of this workshop. Isaac is a leader in the Traditional Medicines research in the country and is one of the few persons qualified in both science as a medicinal and organic chemist and as a traditional doctor in traditional medicine.

Good luck and thank you for your great commitment to fostering and optimising traditional medicine in the international and national communities.







*Rumex scufatus*

## **IV** *Highlights of Plenary Discussion*

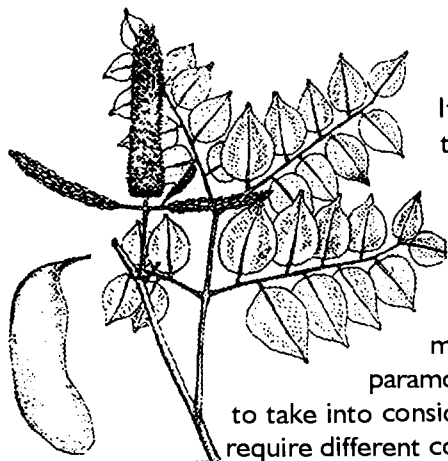
### ***Protection and conservation of medicinal plants and traditional knowledge and implementation of article 8(j) of the convention on biological diversity***

**P**articipants were divided into working groups to discuss the following issues:

- Identification, documentation, propagation and databasing.
- *In situ* and *Ex situ* conservation of medicinal plants.
- African cultural practices that are supportive of the conservation and sustainable utilisation of medicinal plants.
- African indigenous and western knowledge systems.
- Mechanisms and strategies for implementation of article 8(j) of CBD/IPR.
- Perceptions and attitudes.

Regarding identification, documentation, propagation and databasing in medicinal plants, participants noted that in Africa, all efforts (until recently) have centred on agricultural plants. It is necessary that other plants be given attention, especially the underutilised and neglected medicinal plant species. Participants also noted that in connection with article 8(j), there is a need to consider how to prevent erosion of indigenous knowledge. They summarised Article 8(j) as addressing the following issues: presentation of indigenous knowledge, wider application of the knowledge and encouragement of equitable sharing of benefits gained from indigenous knowledge.





It was noted that conservation must also work towards maintaining a certain level of diversity rather than concentrating on individual species, which could have enormous implications in terms of genetic diversity (gene pool). It is important to keep this in mind when considering the conservation of medicinal plants, where the end use is of paramount importance. In addition it is also necessary to take into consideration the fact that each plant species may require different conservation measures.

Participants also noted that gene banks were very secretive and it is not clear what they hold. This information should be made available to enable proper planning and avoid repetitions. Gene banks should also get active in the conservation of medicinal plants now. They have been too specific to agricultural plants.

Participants agreed that propagation implies domestic cultivation techniques, multiplication for commercial use, harvesting and drying techniques, etc. Activities related to documentation/databasing are all forms of documentation or storage of information, such as herbaria, museums, libraries, electronic information technology, on-farm documentation etc., how this information is disseminated to various stakeholders, and that identification of plants implies using both scientific and traditional systems.

It was suggested that to change attitudes it is necessary for many people to understand what traditional medicine practice entails, and that this could be better done by including other medical personnel, e.g. paramedics, in discussions and research concerning traditional medicine practices. Participants noted that there is also a lack of a policy and enabling environment to change attitudes and perceptions, (e.g. no policies that support or promote the use of traditional medicine). There is a need to enforce laws that recognise the contribution of herbalists (e.g. adopt a process whereby traditional medicine practitioners' contribution to the development of products is acknowledged by a stamp on the product).

Regarding the necessity to westernise traditional medicine in order to systematise it, participants felt that traditional medicine in its own way is systematic and that the issue of systematising does not arise. What researchers try to do is actually westernise the system, which is the wrong approach. A consensus was reached that traditional medicine needs to keep pace with development in other areas, but that it should be allowed to develop itself using its own unique (unique to itself) methods. One participant noted that indeed this was already taking place as traditional medicine systems are alive, and therefore should be adaptable to present conditions. Thus they address new conditions, and this is why they have survived to date.



The scientific paradigms that are relevant to orthodox medical systems should not be imposed on traditional medicine systems. On the converse, modern medicine practices should be viewed in the light of indigenous knowledge. As regards integration, it should be recognised that TMP is a science in its own right and perhaps the best approach would be to better equip those knowledgeable in the subject to enable them to develop it. In addition it is clear that three groups exist (traditional medical practitioners, scientists and a middle ground group interested in both areas) all of whom should be encouraged to work together openly, and understand each other's view points. By working openly with each other they will each understand the driving force behind each ideology and be able to work together better.

As a matter of concern it was noted that although traditional medical practice is a distinct entity, the mode of preservation of knowledge may not be sustainable today given the socio-economic changes and factors that are in play, for example, it is not possible to efficiently transmit information orally from generation to generation due to the fact that today formal education takes people away from the set up in which this could be done. Other adjustments are required to ensure this transmission. The only major concern is to ensure that the ownership of this knowledge remains with the traditional healers, who are the rightful owners, and to protect the traditional healers legally so that they do not lose this right. Participants also noted that networking and coordination are necessary for the implementation of this issue.

### ***Participatory research and involvement of local communities and traditional healers.***

Working groups and plenary sessions addressed the following issues:

- Participatory Research approaches for Community Participation.
- Involvement of communities and researchers in research on traditional and conventional/orthodox medicine.
- Validation (laboratory) of traditional medicine/medical preparations and practices.
- Preparation and development of written national pharmacopoeia of medicinal plants through involvement of all stakeholders.
- Bio-piracy, bio-diversity prospecting and conservation in the distribution of benefits from traditional medicines.

It was noted that for a comprehensive pharmacopoeia to be developed, there is a need to collect all information and put it together. This would require getting people to work together, people from different backgrounds in different geographical areas. The enormity of this task, in addition to that of dealing with all potential species, was underscored. Participants noted



that even after the validation process is completed, before publishing the results traditional healers ought to be consulted (issue of rights).

Participants noted that there is usually lack of compensation in use of traditional knowledge even where the communities participate. It was noted that it is necessary that communities be consulted before any data from them is published. Communities should also be informed of their right to say no if they do not want to get involved in a research project for whatever reason.

Furthermore, it is not only traditional healers that should be consulted; other interest groups e.g. gatherers, community representatives even children need to be consulted when it comes to indigenous knowledge and conservation.

It was noted that in this issue, community beliefs pertaining to plants should always be taken into consideration. For example, it is believed that plants in dry areas are more active compared to those in wet areas, and that the season and sometimes even time of day of collection may be crucial to a plant's efficacy. Thus plants should be planted in the right place, under the optimum conditions for exploitation, using appropriate cultivation strategies.

### ***Standardization processes and protocols for research of new drugs and for production of plant derived drugs and development of the traditional medicine industry***

Participants discussed the following issues in working groups:

- Influence of standardization of phytomedicines on indigenous knowledge and conservation of medicinal plants and bio-diversity.
- Role and impact of market forces on medicinal plant uses and conservation
- Conservation and rights (traditional resource rights)

In plenary sessions, participants noted that while it is generally agreed that traditional medicine should be advanced, there is no unanimous agreement about how this should be done. It was noted that researchers who have so far attempted to do this have in many cases "overstepped the boundary" and tried to interpret what they cannot and should not. The question arose as to whether it is possible to scientifically standardise and/or explain some of the practices of traditional medicine. One of the participants noted that there is no proof that the methods and practices of traditional healers are not scientifically correct, regarding for example toxicity, dosage, diagnosis. etc.

On the other hand it may be simply that researchers have not put enough effort into using scientific methods that could explain some of these practices. Participants felt that studies should be carried out to understand the role and impact of banks and financial institutions on the trade in and conservation

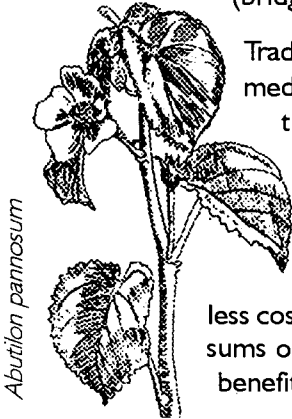


of medicinal plants, the more important forces in trade on medicinal plants, and what is their role in conservation. Participants defined standardisation as processes involved in producing a product with reproducible effect and quality for efficacy and safety.

## **Integration of traditional medicine in public health systems**

Regarding this topic, working groups discussed the following issues:

- Strengthening of traditional medicine and promotion of complementarity between traditional and western medicines (learning from successful experience e.g. ZINATHA).
- Suitable approaches in the promotion and development of traditional medicine through participatory methodologies (learning from successful experience, e.g. TRAMIL Network).
- Training and diffusion of information within health delivery care systems (bridging the gap between the systems)



*Abutilon pannosum*

Traditional medicine has historically been considered unscientific, as medicines prescribed under this system were not standardised, as is the case in western medical systems. This situation has resulted in the creation of fences between the two medical delivery systems; the two operate parallel to each other in many countries in Africa.

The majority of the continent's population exclusively uses the traditional medical system because it is readily accessible and less costly. Despite this, governments in Africa continue to allocate huge sums of money to conventional, western medical delivery systems that benefit very small sections of the population.

Traditional medicinal plants are under constant threat from a variety of pressures emanating largely from population growth, unsustainable harvesting methods and inequitable terms of international trade. Such losses are threatening not just the biological resource but traditional knowledge systems as well. There is need, therefore, for revisiting the whole area of ethnobotanical knowledge systems that encompass peoples' cultural heritage if the rich medicinal plant resource base of Africa is to be conserved.

Traditional and conventional medical practices should initiate open dialogue with a view to addressing the high degree of suspicion that characterises the relationship between the two. Both systems have something to learn from each other. Research institutions working in the area of medicinal plants and traditional medical practice should be transparent in their dealings with traditional medical practitioners. These institutions should validate their findings with these practitioners, a process which will assist in changing attitudes amongst all those involved.





Cassia sieberiana - Flowers

**V**

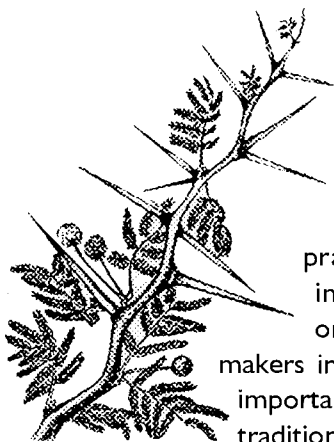
## *Major Results of the Workshop*

**T**he workshop was considered useful by many participants as it brought together researchers, conservationists and traditional and “modern” medical practitioners to share experiences in the area of medicinal plants and traditional medicine. A lot of research has been carried out in the area of medicinal plants and traditional medicine, with traditional medical practitioners and those with traditional knowledge on medicinal plants being the objects of such research. This situation has resulted in bio-piracy and the unrewarded exploitation of intellectual property rights on a continent-wide scale.

A major achievement of the Cape Town workshop was the fact that researchers, academics, conventional western medical practitioners and traditional medical practitioners were afforded an opportunity to sit together and deliberate on issues of concern to all of them. A greater understanding of the concerns of each of the sectors represented at the workshop was realised through this interaction.

The workshop provided networking opportunities for practitioners and researchers in this important sector across the whole of Anglophone Africa. Together with Francophone Africa, which has already been through the same process, a continent-wide network on traditional medicine and medicinal plants could be set up, thereby increasing the flow of information amongst practitioners on the continent. It is recommended that the network be issue-based.





A great deal of information on medicinal plants and traditional medicine is available across the continent. There is a need for this information to be collated in a formal way for standardisation's sake. Researchers and traditional medical practitioners should co-ordinate their efforts around this important issue. Traditional medicine practitioners should organise themselves into a strong lobby and engage policy makers in discussions aimed at achieving greater recognition of this important system of medicine. There are already situations where traditional and western medicine systems are being integrated. These organised bodies are also working with progressive researchers to standardise traditional medicines.

International and regional co-operation in the fields of traditional medicine will only be effective if they are based upon clear understanding of national situations. Initiating co-operation with little or no understanding of local conditions might result in the perpetuation of current problems of bio-piracy. It is recommended that those countries in Africa which have not set up formal representative bodies for traditional medical practitioners now move towards setting them up, as they are useful in getting important issues on national medical agendas. Having said that, however, co-operation should be initiated in the area of sharing of information and experiences at both levels.

Traditional medical practitioners should be more transparent with the systems they use in their practices. Greater transparency will facilitate a clearer understanding of traditional medicine by all those who currently criticise the practice as unscientific.

Documentation and validation of traditional medicine as well as the creation of networks for information exchange will require that traditional medical practitioners themselves be involved in these processes. Further, large capital injections will be required to facilitate these processes. Initiatives of this nature will go a long way in operationalising community involvement in the preservation/conservation of medicinal plant species.

The issue of traditional medicine and medicinal plants is at the root of the livelihoods of the majority of the population on the African continent. There is need to encourage greater participation of practitioners from both conventional and traditional medical practices in research and documentation of plants. This will result in more effective participation of African communities in the protection of bio-diversity.

More importantly, however, is the potential for the integration of traditional and conventional medical delivery systems. There is a need for the two



systems to break down the barriers of suspicion that exist between them if they are to work together. Such co-operation will benefit large populations on the African continent that depend on traditional systems for their survival.

Advocacy for policy change to ensure the recognition of traditional medical systems should be initiated by all those working in this sector. Research and development plans, programmes and policies should be gender sensitive.

## **Workshop recommendations**

### **Issue - based recommendations**

#### ***Protection and conservation of medicinal plants and traditional knowledge and implementation of article 8(j) of the convention on Biological Diversity (CBD).***

- Monitoring and assessment of wild population and marketed plants.
- Support preservation, documentation, inventory and *ex situ* collection, storage, use and marketing of medicinal plants.
- Initiate policy formulation and media programmes for awareness/information and communication.
- Use community based participatory researching methods to identify existing (threatened) cultural practices that promote sustainable use, management and conservation of medicinal plants.
- Promote and enforce equitable sharing of benefits arising from the exploitation of local knowledge.
- Undertake research on policy issues related to article 8(j) of CBD in order to make it applicable within the African context.
- Promote better co-operation and collaboration between indigenous and western knowledge.
- Ensure mutual recognition and clear consciousness of traditional and modern medical systems so that they can operate in an equal relationship.

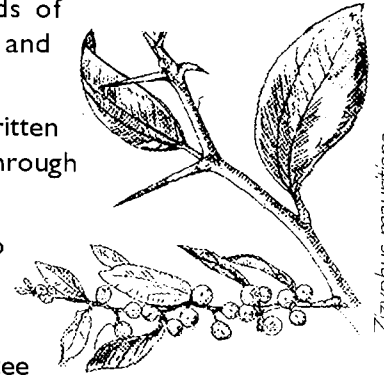
#### ***Participatory research and involvement of local communities and traditional healers***

- Develop, implement and disseminate participatory research methodologies.
- Organise training sessions in participatory research methodologies for all stakeholders.
- Develop acceptable and participatory methods to validate traditional medicine/medical preparation and practices.





- Collect, document and implement methods of validation of traditional medicine practices and products.
- Undertake preparation and development of written national pharmacopoeia of medicinal plants through involvement of all stakeholders.
- Establish a broadly accessible pharmacopoeia to assist all those concerned with medicinal plants. In this regard:
  - Establish a co-ordinating body/steering committee and a multidisciplinary research team at the national level.
  - Evaluate the OAU pharmacopoeia's relevance/adequacy for each country (e.g. in terms of species coverage and coverage of the major applications of the various plants) Identify and collate key sources of other relevant information (databases; other pharmacopoeia)
  - Convene key actors involved through national workshops/meetings to identify key areas for research, to agree on and implement the national work plan and to link up with regional groups.



With regard to bio-piracy, bio-diversity prospecting and conservation in the distribution of benefits from traditional medicines,

- Establish equitable terms of trade pertaining to medicinal plants and knowledge associated with them.
- Develop benefit sharing models.
- Increase value-added production of phytomedicines at local and regional levels.

***Processes and protocols standardisation for research on new drugs and for production of plant-derived drugs and development of the traditional medicine industry***

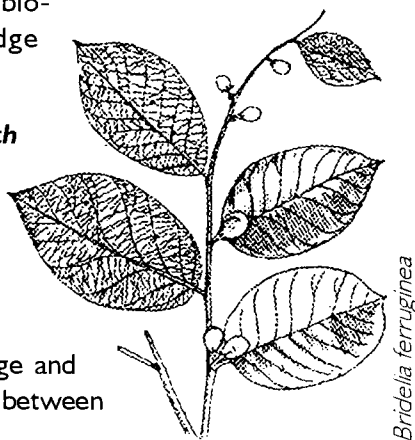
- Develop standardisation procedures that are adaptable to the community level to address the issues of efficacy, safety and quality of phytomedicines.
- In this respect, increase capacity building amongst African research institutions.
- Monitor/regulate and organise market forces for sustainable conservation through recognition and support of traditional medicinal plant trade.



- Collate and harmonise legislation pertaining to biodiversity use and related indigenous knowledge systems.

### **Integration of traditional medicine in public health systems**

- Facilitate organisational management of traditional medicine health care systems and ensure official recognition.
- Initiate networking, training, information exchange and dissemination in order to achieve complementarity between traditional and modern systems.



*Bridelia ferruginea*

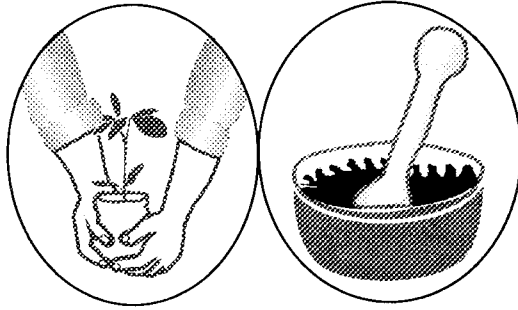
### **General recommendations**

- Develop networking to facilitate regional and international co-operation in medicinal plants, traditional medicine and pharmacopoeia research and development and link up with other medicinal plant programmes in other regions (eg. TRAMIL etc.).
- All research programmes in traditional medicine and medicinal plants should have a gender component.
- As a follow up to the workshop, convene a regional meeting in order to sensitise interested donors and other international organisations to the plan of action in view of possible support and to examine closely policy issues in this area.

### **Follow-up**

- Convene national meetings to define the R & D debate on traditional medicine ensuring adequate representation of traditional medicine practitioners.
- Participants pursue vigorous implementations of the relevant recommendations of the Cape Town workshop and report back to ELCI -IDRC.
- Cape Town workshop should be an interim network and ELCI and IDRC will act as interim focal points for that network for exchange of information and involvement of local communities.
- Formulate and design projects at the national level and regional levels on medicinal plants and traditional medicine related to workshop recommendations.





## VI

# Action Plan

- 1. Protection and Conservation of Medicinal Plants and Traditional Knowledge and Implementation of Article 8(j) of the Convention on Biological Diversity**
- 2. Participatory Research and Involvement of Local Communities and Traditional Healers**
- 3. Standardisation Processes and Protocols for Research of New Drugs and for Production of Plant-derived Drugs and Development of Traditional Medicine Industry**
- 4. Integration of Traditional Medicine in Public Health Systems**

*The proposed consolidated plan of action has been elaborated by compiling the workshops recommendations, the working group reports and the highlights of plenary discussion. Any person interested in getting copies of working group reports can obtain them on request.*



# I. Protection and Conservation of Medicinal Plants and Traditional Knowledge and Implementation of Articles 8(j) of the Convention on Biological Diversity

## a) PARTICIPATORY RESEARCH APPROACHES FOR COMMUNITY PARTICIPATION


OBJECTIVES	CONSTRAINTS <sup>3</sup>	STRATEGIES/ACTIONS
<ul style="list-style-type: none"> <li>• Properly identify, document and conserve medicinal plants.</li> <li>• Promote sustainable utilisation through sustainable harvesting techniques including traditional methods as well as documentation.</li> <li>• Promote community participation.</li> </ul>	<ul style="list-style-type: none"> <li>• Medicinal plants are not properly known, documented and conserved.</li> <li>• Poor propagation methods.</li> <li>• Lack of capacity in terms of human resource, infrastructure and financial.</li> <li>• Lack of recognition of the traditional health sector by most governments.</li> <li>• Gap between traditional and western knowledge systems.</li> <li>• Traditional healers have tended to protect information as one way of protecting their rights, for economic reasons as well as the sacredness/secretcy associated with traditional medicine.</li> <li>• Lack of partnership among stakeholders i.e. between scientists and traditional healers themselves.</li> </ul>	<ul style="list-style-type: none"> <li>• Provide comprehensive assessment of the status of medicinal plant species at the national level both in terms of taxonomic groups and geographical scale.</li> <li>• Establish databases of the information in existing taxonomic collections and associated literature that is currently not readily accessible.</li> <li>• Provide support (funding and technical assistance) to develop computerized information and provide funding for data collection, retrieval, use and dissemination.</li> <li>• Make inventories and assessments of local collections to determine which existing collections are in most need of conservation measures.</li> <li>• Provide training at all levels, informal as well as formal.</li> <li>• Establish collaboration mechanisms between and among stakeholders, and promote awareness through education, lobbying etc.</li> <li>• Develop networking between north-south and south-south.</li> <li>• Implement the OAU initiative on community property rights.</li> <li>• Secure financial support from governments, private sector, international and regional agencies.</li> <li>• Provide assistance to students and facilitate research via internship programs in arboreta, botanical gardens, wildlife parks etc.</li> <li>• Strengthen traditional institutions and transfer power to them within their lands and territories.</li> <li>• Preparation of community registers at local level to document traditional knowledge and practices.</li> <li>• Identify and mobilize expertises as well as formation of working groups or committees to address various aspects of access and sharing of benefits.</li> <li>• Conduct an inventory of existing institutional policy and legal measures governing to medicinal plants and the sharing of benefits.</li> <li>• Review legislation regarding access and benefit-sharing with a view to making suggestions for its improvement to the relevant bodies.</li> <li>• Establish mechanisms to return benefits to support conservation of medicinal plants.</li> <li>• Networking and sharing of ex-situ conservation database information between public and private institutions and government and non-governmental organizations.</li> </ul>





<sup>3</sup> In this report the term "constraints" means: problems, needs, gaps, obstacles, challenges, obstructions.



## b) *IN SITU* and *EX SITU* CONSERVATION OF MEDICINAL PLANTS

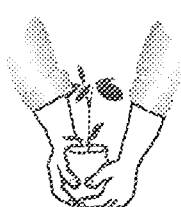
OBJECTIVES	CONSTRAINTS	STRATEGIES/ACTIONS
<ul style="list-style-type: none"> <li>• Promote sustainable conservation and protection.</li> <li>• Increase awareness.</li> <li>• Establish legislation and co-ordination.</li> <li>• Identify priority species.</li> <li>• Support documentation, inventory, and <i>ex situ</i> collection, storage, and use.</li> </ul> 	<ul style="list-style-type: none"> <li>• Over-exploitation and loss of gene-diversity.</li> <li>• Unsustainable harvesting and uncontrolled development.</li> <li>• Conflicts in resource management.</li> <li>• Lack of access and lack of helpful legislative environment.</li> <li>• Establishing gene banks is only mainly for <i>ex situ</i> situation for species already almost extinct. The gene bank has not given the medicinal plants adequate attention, as they should.</li> <li>• Lack of mandate by gene banks.</li> <li>• Inadequacy of existing information on medicinal plants bio-diversity issues.</li> <li>• Difficulties in access to and availability of funding.</li> <li>• Direct economic pressure on ecosystems and lack of national budget allocations.</li> <li>• Need for increased public education awareness.</li> <li>• Scarcity of examples of the effective conservation of medicinal plants.</li> <li>• Lack of appropriate scientific and technical expertise and experience in medicinal plants conservation within government and among stakeholders.</li> <li>• Lack of data on species, and scientific uncertainty about the relationship of loss to extinction rates.</li> <li>• Absence of adequate information on and access to international aid, and on successful experience and strategies.</li> <li>• International co-operation is much more in evidence than regional or sub-regional efforts. It has, however, not yet reached the desired level, allowing for significant progress in medicinal plants.</li> </ul>	<ul style="list-style-type: none"> <li>• Policy formulation for sustainable use.</li> <li>• Empowerment and involvement of stakeholders at all levels (media programs, civil education).</li> <li>• Complement <i>ex situ</i> with <i>in situ</i> conservation measures and activities.</li> <li>• Provide support (funding and technical assistance) to develop computerized information databases.</li> <li>• Provide funding for data collection, retrieval, use and dissemination.</li> <li>• Make inventories and assessments of local collections to determine which existing collections are most in need of conservation measures.</li> <li>• Provide grants and other incentives to assist grass-roots community-level medicinal plants and conservation programs with links to education, training, technology transfer and social policy.</li> <li>• Networking and sharing of <i>ex-situ</i> conservation database information between public and private institutional and government and non-governmental organizations.</li> <li>• Support and create incentives for effective agro-ecological methods that enhance cultivation of medicinal plants.</li> <li>• Reorient land use at local and national levels for conservation of medicinal plants.</li> <li>• Decentralization of biological diversity collections at the local level to increase awareness.</li> <li>• Produce field guides and strengthen reference and voucher collections for sustainable use and conservation.</li> <li>• Training in taxonomy related to medicinal plants.</li> </ul>

**c) AFRICAN CULTURAL PRACTICES THAT ARE SUPPORTIVE OF THE CONSERVATION AND SUSTAINABLE UTILISATION OF MEDICINAL PLANTS**

OBJECTIVES	CONSTRAINTS	STRATEGIES/ACTIONS
<ul style="list-style-type: none"> <li>• Increase the conservation and management of medicinal plants by promoting useful cultural practices.</li> <li>• Integrate local culture and traditions with the conservation initiative.</li> <li>• Enhance local and traditional communities to take part in the conservation and sustained utilization of medicinal plants, using socio-religious and cultural approaches.</li> </ul> 	<ul style="list-style-type: none"> <li>• Erosion of cultural practices due to various factors.</li> <li>• Lack of “self-regulatory” mechanisms at the national level.</li> <li>• Some key stakeholders in the medicinal plant trade not adequately recognised (e.g. traders and gatherers).</li> <li>• Lack of co-ordination between/among different stakeholder groups, especially among traditional healers’ associations.</li> <li>• Need for a national unifying body of traditional healer organisations and other groups involved in the medicinal plant trade.</li> <li>• Inadequate recognition of other natural resource uses and users (i.e. often the same species have many competing and different uses and users).</li> </ul>	<ul style="list-style-type: none"> <li>• Training programs to promote useful cultural practices aimed at supporting local efforts of bio-diversity conservation or sustainable utilisation.</li> <li>• Organise/establish propagation and distribution programs at different levels and scales as appropriate (e.g. promotion of home medicinal and nutritional gardens, community-based and commercial nurseries, large scale propagation efforts by private companies).</li> <li>• Public awareness campaigns and information dissemination to medicinal practitioners and others.</li> <li>• Use community-based participatory research methods to identify existing (and in particular “threatened” cultural practices) that are supportive of conservation and sustainable utilisation of medicinal plants e.g. traditional harvesting and propagation.</li> <li>• Identify potential income generating and self-motivating activities in the area of conservation.</li> <li>• Carry out social science research on ethical, cultural and regional aspects of medicinal plants and bio-diversity.</li> <li>• Encourage and develop capacity building actions for indigenous organizations and local communities.</li> <li>• Sharing local knowledge with other communities.</li> </ul> 

**Main actors:** *Traditional healers, traders and gatherers, appropriate government departments (e.g. community forestry, botanical gardens, reserves etc.), NGOs and CBOs, commercial sectors (e.g. forestry companies, who can afford the costs of cultivating slow growing species).*

## d) MECHANISMS AND STRATEGIES FOR IMPLEMENTATION OF ARTICLE 8(j) OF CBD

OBJECTIVES	CONSTRAINTS	STRATEGIES/ACTIONS
<ul style="list-style-type: none"> <li>• Promote and enforce equitable sharing of benefits arising from the exploitation of local knowledge, for example, monetary benefits, job creation, acknowledgement (degrees), conservation and sustainable utilisation, accessibility to information, technology transfer.</li> </ul> 	<ul style="list-style-type: none"> <li>• Inaccessibility to knowledge (laws, IPR and article 8j).</li> <li>• Unfair exploitation of traditional knowledge.</li> <li>• Lack of government capacity and lack of political will for implementation of article 8(j).</li> <li>• Lack of awareness of article 8(j) among the community, government, NGOs and companies.</li> <li>• Lack of co-operation/co-ordination at the government level.</li> <li>• Lack of clear understanding and mechanisms pertaining to ownership of knowledge (individual or community).</li> <li>• Need for adaptation of article 8(j) to African context.</li> </ul>	<ul style="list-style-type: none"> <li>• Community training in IPR(i.e. patenting).</li> <li>• Awareness of Article 8(j) through education, workshops and information dissemination at all levels (policy makers, communities, e.t.c.).</li> <li>• Institutional capacity for enforcement and compliance. Policy research for implementation for article 8(j).</li> <li>• Adopt policy and legislation for implementation of article 8(j).</li> <li>• Improve co-ordination/inter-sectoral platform.</li> <li>• Distribution of benefits and clear definition of ownership.</li> <li>• Record and conserve traditional knowledge pertaining to medicinal plants management and conservation.</li> <li>• Identify areas in which loss of traditional knowledge is occurring rapidly, so that appropriate steps can be taken to prevent this loss.</li> <li>• Education and training of the younger generations of local communities in traditional knowledge and practices.</li> <li>• Harmonize and facilitate access to government policies of various sectors that are concerned with implementation of article 8(j).</li> <li>• Identify and mobilize expertise as well as formation of working groups or committees to address various aspects of access and sharing of benefits.</li> <li>• Conduct an inventory of existing institutional policy and legal measures governing medicinal plants and the sharing of benefits.</li> <li>• Establish mechanisms to return benefits to support conservation of medicinal plants.</li> </ul>

**Main actors:** *Politicians, government departments, community members, medicinal/pharmaceutical companies, universities.*



### e) AFRICAN INDIGENOUS AND WESTERN KNOWLEDGE SYSTEMS

OBJECTIVES	CONSTRAINTS	STRATEGIES/ACTIONS
<ul style="list-style-type: none"> <li>• Promote increased understanding of the two systems.</li> <li>• Promote better co-operation between the two systems.</li> <li>• Promote communication to generate knowledge aimed to change attitudes.</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of institutional capacity.</li> <li>• Lack of systematic knowledge.</li> <li>• Lack of policy-reform programs.</li> <li>• Insufficient allocation of financial and human resources.</li> <li>• Need for community-based learning systems.</li> <li>• Lack of perceived common concern.</li> <li>• Negative attitudes.</li> </ul>	<ul style="list-style-type: none"> <li>• Develop training curriculae at all levels for existing institutions or establish schools for training if need arises.</li> <li>• Research and disseminate effective methodologies which enhance the complementarity of the two systems.</li> <li>• Adopt policy and legislation which encourage co-operation of the two systems in R &amp; D.</li> <li>• Identify source funding and undertake policy advocacy.</li> <li>• Identify priority areas and implement research on traditional knowledge systems.</li> <li>• Organise forums, meetings and produce newsletters, publications, journals on African medicinal plants and traditional medicine (e.g. establish a specialised African journal on medicinal plants and traditional medicine).</li> </ul>

**Main actors:** *Government ministries and departments, universities and research institutions, NGOs and CBOs, communities, donors, private sector, traditional healers and traditional healers' organisations:*



## F) PERCEPTIONS AND ATTITUDES


OBJECTIVES	CONSTRAINTS	STRATEGIES/ACTIONS
<ul style="list-style-type: none"> <li>• Get traditional medicine and traditional healers exposed in a positive way.</li> <li>• Promote positive view of traditional medicine and traditional healers.</li> <li>• Promote enabling policies.</li> </ul>	<ul style="list-style-type: none"> <li>• Bad publicity by the media.</li> <li>• Stereotypes of traditional medicine and traditional healers by the general public, which is typically negative (perpetuated by the media).</li> <li>• Western personnel never approached the traditional healers to see what they do.</li> <li>• Stagnant stereotypes of 50 years ago.</li> <li>• Problems of translations and words with negative connotations such as "witch-doctor" or "cure".</li> <li>• Need to create understanding of traditional healers in the general public.</li> <li>• Traditional healers need training in areas such as pharmacological and botanical names so they can appropriately interact with western medicine (e.g. modern doctors and researchers).</li> <li>• Lack of training lecturers to be able to teach western medicine about traditional medicine.</li> <li>• There are some charlatans (not really traditional healers) especially in urban set-ups.</li> </ul>	<ul style="list-style-type: none"> <li>• Organise conferences, workshops on traditional medicine for traditional healers and western medicine.</li> <li>• Promote the participation of traditional healers in conferences and workshops.</li> <li>• Media release and newsletters about traditional medicine.</li> <li>• Educate western medicine and pharmacy personnel at university about traditional medicine as a formal part of western medicine training.</li> <li>• Constitute umbrella organisations so real traditional healers are consulted (not consultants).</li> <li>• Referral system where western doctors have a list of traditional healers and where they live so they can refer patients to traditional healers for community based health care follow ups.</li> <li>• Expose traditional healers and western personnel to each other.</li> <li>• Get traditional doctors and western doctors to sit down and talk to each other and establish related policy measures.</li> <li>• To provide education and training for the communities, so that they become aware and concerned about the infrastructure of medicinal plants to the general public.</li> </ul>



**Main actors:** *Traditional healers, western medical personnel, NGOs and donors, media, government agencies, offices, etc. such as health and environment, university administration, lecturers and pharmaceutical students, researchers and conference organisers.*

## 2. Participatory Research and Involvement of Local Communities and Traditional Healers

### a) PARTICIPATORY RESEARCH APPROACHES FOR COMMUNITY PARTICIPATION

OBJECTIVES	CONSTRAINTS	STRATEGIES/ACTIONS
<ul style="list-style-type: none"> <li>• Promote community participation in research.</li> <li>• Develop, adapt, disseminate and implement participatory research methodologies.</li> <li>• Promote incentives to conservation.</li> <li>• Build upon local knowledge and skills in research and development.</li> </ul> 	<ul style="list-style-type: none"> <li>• Poorly trained researchers in participatory research methodologies.</li> <li>• Lack of community participation.</li> <li>• Research used not friendly and feedback from researchers.</li> <li>• Lack of community involvement and fear of exploitation</li> <li>• Lack of flexibility and compromise.</li> <li>• Mistrust by traditional medical practitioners on research.</li> <li>• Lack of cultural sensitivity by researchers.</li> <li>• Lack of understanding of local needs and claims.</li> <li>• Lack of planning to integrate research and conservation and the meeting of local needs.</li> <li>• Lack of benefits for local stakeholders.</li> <li>• Lack of participatory planning to integrate needs.</li> <li>• Poor assessment of local needs and contributions.</li> <li>• Legal and institutional environment unfavorable to participation.</li> </ul>	<ul style="list-style-type: none"> <li>• Document experiences, case studies and best practices on participatory tools and methodologies.</li> <li>• Training in participatory appraisal and planning and in participatory research project design and methodologies.</li> <li>• Understand national policies and laws affecting community participation in R &amp; D.</li> <li>• Decentralizing decision-making within the conservation initiative.</li> <li>• Review of indigenous/customary systems.</li> <li>• Organize community workshops focused on research (objectives and benefits).</li> <li>• Training and capacity building to empower communities (eg. literacy).</li> <li>• Establish clear guidelines for involvement and participation of local communities.</li> <li>• Establish guidelines aimed at identifying problems and possible solutions in conjunction with community.</li> <li>• Political support for participation in R &amp; D pertaining to medicinal plants and traditional medicine.</li> <li>• Define channels, economic resources, mechanisms and human resources to support participation.</li> <li>• Develop methodologies and tools aimed at helping stakeholders organize and strengthen local organizations.</li> <li>• Visits to similar initiative with strong participatory components.</li> <li>• Create an effective legal basis for participation.</li> <li>• Assist local communities to develop their own conservation initiatives (e.g. guidelines, training, information dissemination, technical assistance).</li> <li>• Identify and define incentives and benefits for local stakeholders.</li> </ul>

**Main actors:** Researchers, traditional healers, traditional leaders.



## b) INVOLVEMENT OF COMMUNITIES AND RESEARCHERS IN RESEARCHING TRADITIONAL AND CONVENTIONAL ORTHODOX MEDICINE

OBJECTIVES	CONSTRAINTS	STRATEGIES/ACTIONS
<ul style="list-style-type: none"> <li>• Involve the community in research and promote researchers' respect of the communities when researching traditional and conventional medicine.</li> <li>• Give communities the ability to know and understand the activities of research institutions.</li> <li>• Promote compensation of traditional knowledge.</li> </ul>	<ul style="list-style-type: none"> <li>• Communities are not given a role in the initiation of research activities (both traditional and conventional medicine).</li> <li>• Attitudes of western researchers and research institutions towards Africa (neo-colonialism).</li> <li>• Poor oversight of research activities by research institutions and lack of proper research protocol.</li> <li>• Lack of gender and cultural sensitivity by researchers.</li> <li>• Lack of education on the part of local communities about their rights concerning research activities.</li> <li>• Communities are even less involved in research activities concerning conventional medicine.</li> <li>• Community and individual contributions to research activities are typically not acknowledged by researchers and research institutions (lack of respect).</li> <li>• Communities are used to legitimise research activities and research institutions to the benefit of researchers and institutions, not for the benefit of communities.</li> <li>• Political tensions and influence which affect research issues.</li> <li>• Lack of education on the part of local communities about their rights concerning research activities.</li> <li>• Little consideration of the interests and aspirations of local communities.</li> <li>• Ambitions of researchers and research institutions.</li> </ul>	<ul style="list-style-type: none"> <li>• Creation of a national research council with members as representatives of traditional healers.</li> <li>• Develop guidelines for negotiation and contract between researchers and local communities.</li> <li>• Identify research priorities.</li> <li>• Education of local communities on their rights and ability to be compensated (including the right to say "no" to researchers).</li> <li>• Create a platform for continuous interaction between traditional healers and modern practitioners.</li> <li>• Develop and use ethical principles for community involvement in research activities.</li> <li>• Deposit research data, findings and reports into a repository for local communities' access.</li> <li>• Liaison between traditional and conventional medical personnel in research activities where there is a true equitable treatment.</li> <li>• Bring traditional healers into research institutions to understand and validate the processes there.</li> <li>• Inform traditional healers of research findings and allow them to review findings before publication.</li> <li>• Establish policy, legislation and other mechanisms for equitable compensation of traditional knowledge and for research in the areas of medicinal plant bio-diversity.</li> <li>• Strengthen the role of women in medicinal plants conservation and traditional health systems.</li> </ul>



**Main actors:** *Local communities, traditional healers, western medical personnel, researchers, research institutions, government structures, NGOs, CBOs, donors and industry.*

### c) SCIENTIFIC VALIDATION OF TRADITIONAL MEDICINE/ MEDICAL PREPARATIONS AND PRACTICES

OBJECTIVES	CONSTRAINTS	STRATEGIES/ACTIONS
<ul style="list-style-type: none"> <li>• To establish scientific (e.g. respectable) basis for the use of traditional medicine.</li> <li>• To promote a wider use of traditional medicine.</li> </ul> 	<ul style="list-style-type: none"> <li>• There is a need for validation of traditional medical practices so that this sector can be accorded its rightful place in the healthcare system.</li> <li>• Lack of legal protection of property rights.</li> <li>• Lack of information from the side of traditional medical practitioners on the preparation methods, collection methods, posology/dosages, contraindication/aetiology, mechanism of action of the preparations, toxicity/antidote.</li> <li>• Lack of facilities suitable for validation of traditional medicines.</li> <li>• Technical constraints, in particular, a lack of know-how and expertise.</li> </ul>	<ul style="list-style-type: none"> <li>• Establish an enabling environment for exchange of information (legal aspects, seminars, workshops etc.).</li> <li>• Dissemination and documentation of methods for validation of traditional medical practices and preparations.</li> <li>• Development of validation methods by the traditional healers (lab, physic, clinical, subclinical and customary).</li> <li>• Establish mechanisms for protection of IPR.</li> </ul> 

**Main actors:**

*Traditional medical practitioners, community/patients, biomedic researchers, governments, public and private organisations, NGOs, funding agencies, students.*



*Melaleuca leucodendron*



**d) PREPARATION AND DEVELOPMENT OF WRITTEN NATIONAL PHARMACOPOEIA OF MEDICAL PLANTS THROUGH INVOLVEMENT OF ALL STAKEHOLDERS**

OBJECTIVES	CONSTRAINTS	STRATEGIES/ACTIONS
<ul style="list-style-type: none"> <li>To establish a broadly accessible pharmacopoeia, with reference to the African pharmacopoeia, developed under the auspices of the OAU and linked to other sources of network information i.e. existing traditional documents.</li> </ul>	<ul style="list-style-type: none"> <li>Lack of national co-ordination among many different actors and interest groups.</li> <li>Lack of comprehensive national pharmacopoeia.</li> <li>Documentation, technology/expertise and facilities may be inadequate or lacking.</li> <li>Lack of sufficient information and too many species to be addressed (need for prioritisation).</li> </ul>	<ul style="list-style-type: none"> <li>Establish a co-ordinating body "steering committee".</li> <li>Establish multi-disciplinary research teams for gathering/analysis of information and for identification of core/essential data required.</li> <li>Identification of available resources (including human, financial, technical/infrastructural).</li> <li>Evaluate the OAU pharmacopoeia's relevance/adequacy for the country (e.g. in terms of species coverage, coverage of the major applications of the various plants).</li> <li>Identify and collect key sources of the relevant information (databases, other pharmacopoeia).</li> <li>Convene key actors involved through a national workshop/meeting to identify key areas for research, to agree on and implement the national workplan and to set up regional groups.</li> </ul>

**Main actors:** Research institutions/universities, NGOs, community, state herbaria, government bodies, parastatals, pharmaceutical companies, hospitals and clinics.

**Others:** Traditional healers, medical doctors, nurses, public health workers/practitioners (involved in preventive/primary health care), botanists, taxonomists, ecologists, agronomists, phytochemists, toxicologists, ethnopharmacologists, ethnobotanists, medical anthropologists, mothers.

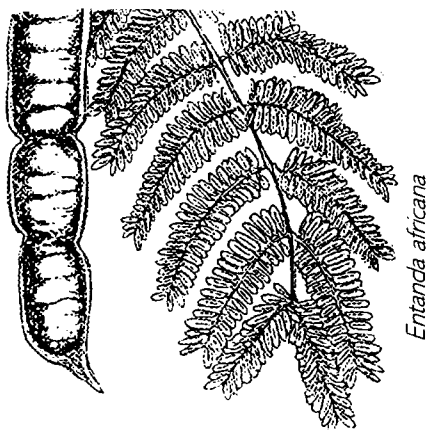


**e) BIO-PIRACY, BIO-DIVERSITY PROSPECTING AND CONSERVATION IN THE DISTRIBUTION OF BENEFITS FROM TRADITIONAL MEDICINES**

OBJECTIVES	CONSTRAINTS	STRATEGIES/ACTIONS
<ul style="list-style-type: none"> <li>• Define equitable terms of trade.</li> <li>• Elaborate measures to assure that bio-prospecting activities support, or at least do not harm efforts to conserve medicinal bio-diversity.</li> <li>• Protect local knowledge from exploitation by commercial users including protection against imposition of IPRs by outsiders - by providing proof of prior use, and enforcing the requirement of PIC of the concerned communities.</li> </ul>	<ul style="list-style-type: none"> <li>• Unequitable distribution and exchange of benefits from bio-prospecting.</li> <li>• Absence of political will related to a lack of awareness of the socio-economic importance of medicinal plants.</li> <li>• Fragmentation of stakeholders (national and international).</li> <li>• Lack of definition and understanding of community property rights.</li> <li>• Trade research/ surveys.</li> <li>• Inadequate and ill-adapted legislation and regulations.</li> <li>• Lack of resources - technical, financial and human.</li> </ul>	<ul style="list-style-type: none"> <li>• Develop multilateral agreements, review existing legislation and international obligations and implement policy reform.</li> <li>• Promote national, regional and local awareness campaigns (consumers, communities, government, public and private sector).</li> <li>• Establish process for assistance in negotiation and legal aspects and develop capacity building.</li> <li>• Develop incentives for bio-diversity conservation (rights information, economic and financial measures).</li> <li>• Carry out survey and analyse benefit sharing through case studies.</li> <li>• Increase value-added production at local and international level.</li> <li>• Initiate regional harmonisation of policy and legislation.</li> <li>• Promote cultivation by local commercial growers and encourage pressure groups within communities.</li> <li>• Establish green labels and standards in companies.</li> <li>• Participate in regional and international policy development in the area of bio-prospecting.</li> </ul>



### 3. Standardisation Processes and Protocols for Research of New Drugs and for Production of Plant-Derived Drugs and Development of Traditional Medicine Industry



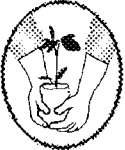
*Entanda africana*

#### a) INFLUENCE OF STANDARDISATION OF PHYTOMEDICINES ON INDIGENOUS KNOWLEDGE AND CONSERVATION OF MEDICINAL PLANTS AND BIO-DIVERSITY

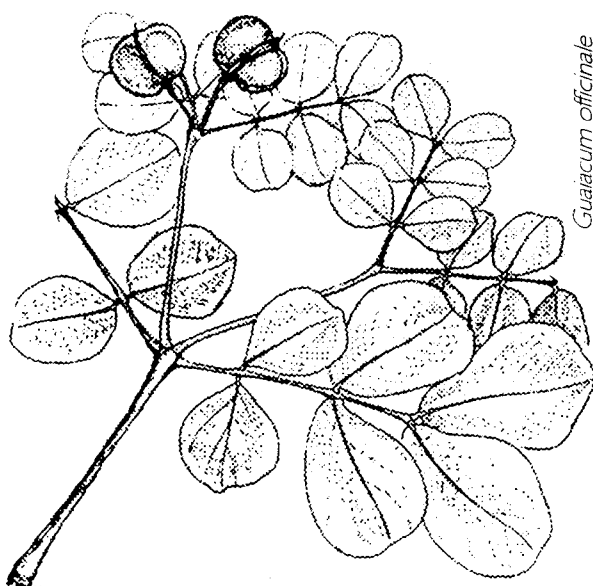
OBJECTIVES	CONSTRAINTS	STRATEGIES/ACTIONS
<ul style="list-style-type: none"> <li>• Ensure that standardisation procedures take into account the potential impact on indigenous knowledge, conservation of medicinal plants and bio-diversity.</li> <li>• Support research that can lead to safe, effective, affordable herbal medicines of high quality.</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of suitable models (methods and tools).</li> <li>• Insufficient human resources (in terms of capacity and indigenous expertise).</li> <li>• Lack of good manufacturing practices.</li> <li>• Lack of R &amp; D on product and process development.</li> <li>• Poor agricultural practices and harvesting (indiscriminate) and post-harvest treatment practices.</li> <li>• Lack of research on development of high yielding varieties, domestication, etc.</li> <li>• Inefficient processing techniques leading to low yields and poor quality products.</li> <li>• Poor quality control procedures and high energy loss during processing.</li> </ul>	<ul style="list-style-type: none"> <li>• Build scientific and technological capacity.</li> <li>• Develop new and promote existing national legislation of traditional medicine taking into consideration standardisation requirements.</li> <li>• Creation/establishment of institutions for development and standardization of traditional medicine.</li> <li>• Implement research projects that involve local communities and traditional healers for validation of traditional medicine practices.</li> <li>• Develop appropriate methods for standardization at the local level.</li> </ul>

**Main actors:** *Traditional medical practitioners, politicians and governments, researchers and institutions, funding agencies, communities in general.*

## b) ROLE AND IMPACT OF MARKET FORCES ON MEDICINAL PLANT USES AND CONSERVATION

OBJECTIVES	CONSTRAINTS	STRATEGIES/ACTIONS
<ul style="list-style-type: none"> <li>• Monitor/regulate and organise market forces for sustainable conservation through recognition and support of traditional medicinal plant trade.</li> </ul> 	<ul style="list-style-type: none"> <li>• Lack of information and capacity.</li> <li>• Demand/supply imbalances.</li> <li>• No control over market forces.</li> <li>• Lack of co-ordination and political will.</li> <li>• Competition among stakeholders.</li> <li>• Poor pricing (standardisation).</li> </ul>	<ul style="list-style-type: none"> <li>• Create national/regional/international regulation and legislation.</li> <li>• Regulate market forces.</li> <li>• Encouragement of land provision for medicinal plant cultivation.</li> <li>• Small business protection.</li> <li>• Encourage local community cultivation at various levels through training (e.g. home gardens with both food and medicinal plants).</li> <li>• Develop ecological medicinal gardens as training centres.</li> <li>• Establish nurseries to encourage propagation to provide species to people who want to cultivate medicinal plants.</li> </ul>

**Main actors:** Local communities, governments, chambers of commerce, botanists, universities, national centres for seeds (research institutions, banks, financial institutions, private sector (plant suppliers both local and international)).

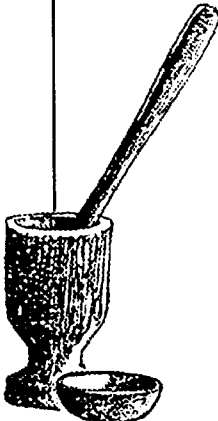






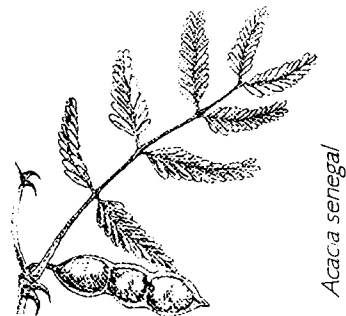
*Ficus platyphylla*

### c) CONSERVATION AND TRADITIONAL RESOURCE RIGHTS

OBJECTIVES	CONSTRAINTS	STRATEGIES/ACTIONS
<ul style="list-style-type: none"> <li>• Ensure sustainable utilisation of resources.</li> <li>• Recognition and protection of owners of knowledge.</li> </ul> 	<ul style="list-style-type: none"> <li>• Lack of ownership of resources.</li> <li>• Lack of ownership of knowledge.</li> </ul>	<ul style="list-style-type: none"> <li>• Carry out situation analysis (health, demand, biological etc.) and needs analysis (status of plants) at local and then other levels.</li> <li>• Initiate value added activities at local level and then other levels.</li> <li>• Use local as well as other knowledge for cultivation and propagation of plants.</li> <li>• Create incentives for income generation opportunities at local and then other levels.</li> <li>• Establish resource use management systems involving all resource users (co-management).</li> <li>• Integrate and harmonize different systems of legislation affecting different rights.</li> <li>• Identify stakeholders and initiate co-management plans and capacity building for conflict resolution.</li> <li>• Initiate advocacy process and review legislation and international commitments under conventions.</li> <li>• Recognise outstanding knowledge with rewards.</li> </ul>


**Main actors:** training institutions, local experts, NGOs, civil society organisations, experts (e.g. legal) and government.

## 4. Integration of Traditional Medicine in Public Health Systems




*Acacia senegal*

### a) STRENGTHENING OF TRADITIONAL MEDICINE AND PROMOTION OF COMPLEMENTARITY BETWEEN TRADITIONAL AND WESTERN MEDICINES (LEARNING FROM SUCCESSFUL EXPERIENCES (e.g., ZINATHA))

OBJECTIVES	CONSTRAINTS	STRATEGIES/ACTIONS
<ul style="list-style-type: none"> <li>Strengthening of traditional medicine organisations to promote complementarity between traditional medicine and western medicine.</li> </ul> 	<ul style="list-style-type: none"> <li>Lack of complementarity between traditional medicine and modern medicine.</li> <li>Influence of political power on healer organisations.</li> <li>Low education level of healers.</li> <li>Lack of political will and appropriate legislation (weak political base).</li> <li>Negative attitudes towards traditional medicine.</li> <li>Erosion of culture.</li> <li>Continued resistance by western medicine and traditional medicine.</li> <li>Deceit.</li> </ul>	<ul style="list-style-type: none"> <li>Increase information dissemination and sharing.</li> <li>Train traditional healers in formal education systems for western doctors.</li> <li>Combination of traditional healing and western medicine at primary health care and clinic level.</li> <li>Establish hospitals/clinics for traditional healing.</li> <li>Improving professionalism - efficacy of medicine, hygiene standardisation, training of healers.</li> <li>Remove legislative barriers that prevent complementarity.</li> <li>Strong research and development in traditional medicine.</li> <li>Regional co-operation of healer associations.</li> <li>Hold joint workshops between traditional medicine and western medicine.</li> <li>Establish legislation for legal recognition and status.</li> <li>Establish independent traditional healer council (by Act of Parliament, Regulation and Governance).</li> <li>Establish provincial/district umbrella organisations and national associations.</li> </ul>

**Main actors:** *Traditional healer associations, NGOs, governments, medical councils, (western and traditional community), universities, funding agencies.*

**b) SUITABLE APPROACHES IN THE PROMOTION AND DEVELOPMENT OF TRADITIONAL MEDICINE THROUGH PARTICIPATORY METHODOLOGIES (LEARNING FROM SUCCESSFUL EXPERIENCES, E.G. TRAMIL NETWORK)**

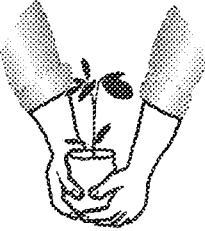
OBJECTIVES	CONSTRAINTS	STRATEGIES/ACTIONS
<ul style="list-style-type: none"> <li>• Co-ordination of efforts through participatory methods for promotion of research and development.</li> </ul> 	<ul style="list-style-type: none"> <li>• Lack of coverage of traditional medicine in Africa.</li> <li>• Lack of co-ordination among key players.</li> <li>• Isolated efforts among key players.</li> <li>• Non-participatory methodologies in the promotion and development of traditional medicine (top-down).</li> <li>• Lack of technical expertise.</li> <li>• Top-down approach by donors, governments and policy makers.</li> <li>• Lack of uniform professional standards.</li> <li>• Negative attitudes towards traditional medicine by some institutions.</li> <li>• Lack of access to latest technological information.</li> <li>• Lack of local market for primary processed products.</li> <li>• Difficulties in marketing.</li> </ul>	<ul style="list-style-type: none"> <li>• Launch an African journal on traditional medicine.</li> <li>• Prioritisation of areas for promotion and development in participatory manner.</li> <li>• Media releases on the aspects of traditional medicine (e.g. audio-visual publications, etc.).</li> <li>• Fund raising for community identified activities.</li> <li>• Development of a clear and timely regional plan of action.</li> <li>• Involve communities and traditional healer participation at all levels and delegate specific tasks to specific people.</li> <li>• Increase networking and information exchange among key players.</li> <li>• Assess what has been lost and what is remaining in traditional medicine, as well as assessment of what works and what does not work.</li> </ul>

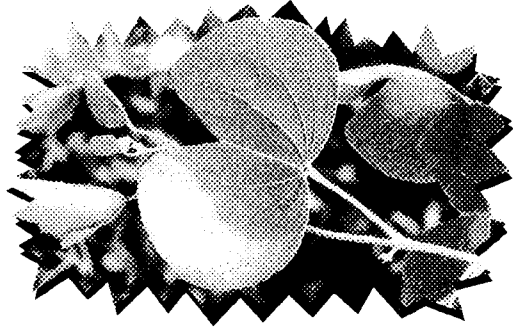




*Grewia mollis*

**c) TRAINING AND DIFFUSION OF INFORMATION WITHIN THE HEALTH CARE DELIVERY SYSTEMS (BRIDGING THE GAP BETWEEN THE SYSTEMS)**

OBJECTIVES	CONSTRAINTS	STRATEGIES/ACTIONS
<ul style="list-style-type: none"> <li>• Provide health care system appropriate to the community it serves.</li> <li>• Achieve a complementary or collaborative approach to health care delivery.</li> <li>• Promote an understanding and tolerance of the two world views, learn from one another and promote an awareness of the value of both systems.</li> </ul> 	<ul style="list-style-type: none"> <li>• Limited resources (human, infrastructure, etc.).</li> <li>• Lack of motivation and political will.</li> <li>• Lack of consultation within/ between institutions and government departments.</li> <li>• Lack of clarity about restructuring and agendas.</li> <li>• Lack of organisation between institutions and government departments.</li> <li>• Lack of common understanding, communication and co-operation between traditional medicine and western medicine on causes and treatment of diseases.</li> <li>• Limited integrated approach to health care delivery</li> <li>• Prejudices on both sides (traditional medicine and western medicine).</li> <li>• Limited training systems and resources that incorporate both health care systems.</li> <li>• Lack of unity between healer organisations.</li> </ul>	<ul style="list-style-type: none"> <li>• Set up channels of communication within the existing structures and identify key players.</li> <li>• Define areas of common ground and needs of the communities in health care and the operating systems (western and traditional) between all three.</li> <li>• Inventory existing resources (human, infrastructure, institutions, organisations, governments, departments) and identify gaps.</li> <li>• Create national training programs and health care facilities starting at local levels and then other levels (propagation, conservation).</li> <li>• Achieve government recognition at an appropriate health level.</li> <li>• Organise meetings of representatives of all relevant stakeholders to establish plans of action (media, workshops, education material, etc.).</li> <li>• Develop suitable educational materials and develop further mechanisms and lobby authorities.</li> <li>• Information dissemination through workshops, mass media, awareness campaigns and demonstration plots at community level.</li> </ul>



*Piliostigma reticulatum*

# VII

# Appendices

1. Workshop Agenda
2. List of papers
3. List of Participants



*Zingiber officinale*



# I. Workshop Agenda

**MONDAY 13 APRIL** Registration

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**TUESDAY 14 APRIL**

09h00 - 10h15	<b>OPENING SESSION</b> <ul style="list-style-type: none"><li>• TRAMSO</li><li>• ELCI</li><li>• IDRC</li><li>• Head of U.C.T School of Pharmacy (Key Note Address)</li><li>• Introductions (Facilitator).</li></ul>
10h15 - 10h30	Tea/Coffee
10h30 - 11h00	<b>INTRODUCTORY PAPER</b>
11h00 - 13h00	<b>PRESENTATIONS - TOPIC 1</b> <ul style="list-style-type: none"><li>• Protection and conservation of medicinal plants and traditional knowledge and Implementation of article 8 (j) of the Convention on Biological Diversity (CBD)</li></ul>
13h00 - 14-00	Lunch
14h00 - 15h00	<b>DISCUSSIONS</b>
15h00 - 15h30	Tea/Coffee
15h30 - 18h00	<b>WORKING GROUP SESSIONS</b>
18h00 - 20h00	Dinner
20h00	<b>REPORT READY</b>

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**WEDNESDAY 15 APRIL**

08h30 - 10h15	<b>PLENARY TOPIC 1</b>
10h15 - 10h30	Tea/Coffee
10h30 - 13h00	<b>PRESENTATIONS - TOPIC 2</b> <p>Participatory research and involvement of local communities and traditional healers.</p>
13h00 - 14h00	Lunch
14h00 - 15h00	<b>DISCUSSIONS</b>
15h00 - 15h30	Tea/Coffee Break
15h30 - 17h30	<b>WORKING GROUP SESSIONS</b>
17h30 - 18h30	<b>REPORT PRODUCTION</b>
18h30	Dinner
18h30	Report typing



**THURSDAY 16 APRIL**

08h30 - 10h15	PLENARY TOPIC 2
10h15 - 10h30	Tea/Coffee Break
10h30 - 13h30	PRESENTATIONS - TOPIC 3 • Development of standardised processes and protocols for research on new drugs and for production of plant derived drugs and development of traditional medicine industry.
13h00 - 14h00	Lunch
14h00 - 15h00	DISCUSSIONS
15h00 - 15h30	Tea/Coffee Working Group Sessions
15h30 - 18h00	WORKING GROUP SESSIONS
18h00 - 20h00	Cocktail
20h00	REPORT TYPING

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**FRIDAY 16 APRIL**

08h30 - 10h15	PLENARY TOPIC 3
10h15 - 10h30	Tea/Coffee Break
10h30 - 13h30	PRESENTATIONS - TOPIC 4 • Integration of traditional medicine in public health systems.
13h00 - 14h00	Lunch
14h00 - 15h00	DISCUSSIONS
15h00 - 15h30	Tea/Coffee Working Group Sessions
15h30 - 18h00	WORKING GROUP SESSIONS
18h00 - 20h00	Cocktail
20h00	REPORT TYPING

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**SATURDAY 18 APRIL****ACTION PLAN AND FOLLOW UP**

08h30 - 10h30	BRIEF PRESENTATIONS BY • ELCI • IDRC  PLENARY DISCUSSION
10h30 - 10h45	Tea/Coffee Break
10h45 - 12h00	PLENARY DISCUSSION
12h00 - 12h30	Closing • TRAMSO



## **2. List of Papers Presented at the Workshop**

1. ***Intellectual property rights***  
by Dr. Seth Seroka
2. ***Medicinal plants and local communities in Africa***  
by Isaac Mayeng
3. ***The Indigenous Resource Use Society of South Africa***  
by Danny Naidoo
4. ***Optimum strategies for the development of medicinal plants and traditional medicines research in Malawi with special emphasis on the international traditional medicines council of Malawi (ITMCM)***  
by : Yesetsani Kambewankako
5. ***Medicinal plants and traditional medicine in Zimbabwe***  
by: Prof. G.L. Chavanduka
6. ***Urban patients' utilisation of traditional medicine: upholding culture and tradition***  
by Debie LeBeau
7. ***Medicinal Plants as Sources of antivirals***  
by: Prof. Jim Hudson
8. ***Participatory research and involvement of local communities and traditional healers: potential benefits and pitfalls***  
by Dr. Hellen A. Oketch
9. ***Community resource monitors: linking natural resource management to participatory research in Namibia***  
by: Karine Rousset
10. ***The role of traditional medicine in Namibia's public health system***  
by Siballi E. I Kgobetsi
11. ***Medicinal plant use by traditional Birth Attendants (TBAS)***  
By: Mrs. Guddy Bajiginywa
12. ***Protection and conservation of medicinal plants and traditional knowledge***  
by: Prof. Osmund D. Mwandemele
13. ***Medicinal plants and traditional medicines: today, tomorrow and the future***  
By Khungeka Njobe
14. ***The Marketing of indigenous medicinal plants in South Africa: A case study in Kwazulu Natal***  
By: Myles Mander
15. ***Cultural resource management integrated efforts: perspectives on African living culture***  
by: Bulelwa Mbangu





16. **Conservation and production of traditional medicine plants in home gardens: The Case of Ethiopia**  
by: Zemedede Asfaw
17. **Some recent collaborative steps to gain recognition for traditional healers and to enhance primary health care in local communities in Kwazulu-Natal**  
by Anne Hutchings
18. **Traditional medicine trade: A case of Malawi National Herbarium and Botanic Gardens of Malawi**  
by: Cecilia Promise Maliwichi
19. **Development and production of standardised phytomedicines,**  
Prof. Charles Wambebe
20. **Enthnobotanical studies upon medicinal plants in Burkina Faso**  
by: Marc Olivier
21. **Protection and conservation on medicinal plants in Botswana: The case of harpagophytum procumbens, DC**  
BY: Tebogo Malthare
22. **Baseline chemical studies that aid in the development of essential oil and medicinal plant industry in Africa,**  
By: Ermias Dagne
23. **Traditional medicine program in Mozambique Perspectives to come together with modern medicine.**  
By: A.B. Agostinho, D. Manjate, J. Massingarella
24. **Medicinal plants and traditional medicines in Africa: Review of activities, needs, challenges and perspectives**  
by Serge Dubé, François Gasengayire
25. **Sustainable conservation and protection of medicinal plants with indigenous/traditional knowledge: issues arising as a result of article 8(j) of the Convention of Bio-Diversity (CBD)**  
By: Monica Opole
26. **The role of herbarium in the conservation of medicinal plants**  
by: Frank M. Mbogo
27. **Problems and constraints in use of medicinal plants and traditional medicine in Malawi**  
J.D.K. Saka, A. Ndibwami and E. Henry.
28. **Tramil Network: Carribbean basin medicinal plants.**  
by: Lionel Germosen - Robineau



### 3. List of Participants

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*Terminalia macroptera*

## **The Environment Liaison Centre International (ELCI)**

The Environment Liaison Centre International (ELCI) is located in Nairobi, Kenya and was established in 1974 with the aim of strengthening communication and cooperation between NGOs and local communities providing liaison between NGOs and the United Nations Environment Programme (UNEP), helping to strengthen NGO and local community capacities in developing countries and encouraging the advisory role of NGOs through the organs of the United Nations. ELCI is an international non-governmental organisation which brings together 900 NGOs in more than 100 countries. As a global coalition of NGOs, its work has mostly focused on indigenous knowledge, biodiversity and medicinal plants, plant genetic resources, desertification, sustainable agriculture and food security, forests etc. ELCI acts as the secretariat as well as the coordination centre for several NGO networks related to the above issues.

In the context of natural resources management pertaining to medicinal plants and related issues, ELCI is involved in promoting local participatory research and policy analysis to ensure that traditional resource rights for indigenous peoples and local communities are taken into consideration in all forms of R & D. In the area of R & D pertaining to biodiversity management, conservation and awareness, ELCI aims to work and build on local knowledge because the problems associated with natural resource management are essentially specific to localities; hence solutions must be sought through cooperation and involvement of local communities. ELCI's work is rooted in consensus that NGOs are quite strong at promoting local participation and therefore play an increasingly important role in participatory research and extension in developing countries, particularly in localities where the institutional infrastructure is weak. In these areas, the ability of public research and extension institutions to serve local communities is specially limited by inadequate financial support, human resources and facilities.

## **International Development Research Centre (IDRC)**

The International Development Research Centre (IDRC) is a public corporation created by the Parliament of Canada in 1970 to support technical and policy research to help meet the needs of developing countries. The Centre is active in the fields of environment and natural resources, social sciences, health sciences, and information sciences and systems. Regional offices are located in Africa, Asia, Latin America, and the Middle East. The International Development Research Centre (IDRC) provides funds and expert advice to developing country researchers who conduct research to identify long term, practical solutions to pressing development problems. IDRC provides funds to enable researchers to improve their skills. It helps them build contacts with each other and with others who are interested in the results of their research. The International Development Research Centre develops activities through fifteen program initiatives. Activities in the field of Traditional Medicine and Medicinal Plants are conducted under the Sustainable Use of Biodiversity Program Initiative. The goal of the Sustainable Use of Biodiversity Initiative is to enhance the capacity of local and indigenous peoples to protect, access, and sustainably use Biodiversity and to enhance the knowledge of biodiversity. It places particular emphasis on the gender aspects of conservation and sustainable use. To reach this goal, the initiative supports multi disciplinary research that focuses on enhancing the sustainable use of Biodiversity by local communities.