7. MEDICINAL PLANTS

Traditional healer next to a mango tree, whose bark is used for treating diarrhea (central Uganda).

HIV/AIDS and healthcare

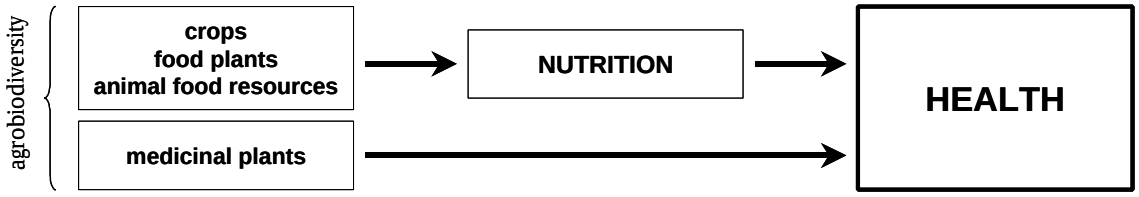
Healthcare is one of the critical development issues in Africa, more than ever in the context of the HIV/AIDS epidemic, which represents an unprecedented health crisis. HIV/AIDS is not only a recent pandemic, but it is one with multifaceted health impacts. In the first place, HIV/AIDS causes immune debilitation, which facilitates and aggravates many other diseases and health problems, such as tuberculosis and chronic diarrhoea. In addition, HIV/AIDS seems to lead to malnutrition, owing to an associated loss of appetite and other changes in metabolic functioning, which further aggravates health quality and limits health recovery among people living with HIV/AIDS. Finally, the concurrence of HIV/AIDS and malnutrition creates a downward cycle of health deterioration, which is alarming in Sub-Saharan Africa because this region accounts for the world's highest HIV/AIDS epidemic levels and malnutrition depth.

Although new medical treatments for a wide range of health problems related to HIV/AIDS are rapidly developing, the African poor cannot access them because of global economic and trade inequalities. Therefore, in the struggle against HIV/AIDS is urgently required to dissolve the economic, trade and legal barriers that impede the poor to access modern HIV/AIDS treatments and other healthcare therapies. That is, in fact, an international moral responsibility because such barriers define the borderline between prompt death and prolonged survival among poor people living with HIV/AIDS (Garí, 2003). At the same time,

it is necessary to incorporate every instrument available to address the healthcare needs of the rural poor, including the broad range of health concerns related to the HIV/AIDS epidemic.

In healthcare action, the major role for the agricultural sector is to improve nutrition. In this sense, agrobiodiversity-based actions to improve household nutrition has been already proposed. In addition, medicinal plants represent an agrobiodiversity component that is equally relevant to mitigate HIV/AIDS impact, particularly among the rural poor. In fact, medicinal plants represent valuable healthcare resources in rural Africa, especially in view of the vitality of indigenous healthcare systems, the shortage of modern healthcare services, and the disgraceful discrimination of the African poor in accessing modern medicines. The consideration of medicinal plants in the struggle against HIV/AIDS demands closer collaboration between the agricultural and health sectors.

Box 26. Agrobiodiversity and healthcare



Medicinal plants and traditional healthcare systems

Medicinal plants constitute a fundamental component of traditional healthcare systems in rural communities throughout Africa. It is commonly accepted that about 80% of people in the developing world rely on traditional medicine for most of their healthcare issues (Bodeker, 1999; Joyce, 1992; King, 2000; WHO, 2002). In Africa, rural people depend heavily, if not exclusively, on medicinal plants, indigenous healthcare knowledge and traditional medicine to meet their healthcare needs.

The roles of both herbal treatments and traditional healers in healthcare in the developing world have been much neglected. Traditional and modern healthcare systems are often regarded as incompatible. Health policies and programmes focus exclusively on modern healthcare systems, practices and resources. Policy-making spheres, which are heavily influenced by a urban and Western mentality, regard traditional medicine and herbal treatments as ineffective or inappropriate for formal healthcare. However, the promotion of medicinal plants and the integration between traditional and modern healthcare systems are very promising.

In fact, the World Health Organisation has been for some time promoting medicinal plants in healthcare action, as well as encouraging the integration between modern and traditional healthcare systems, in a number of ways: World Health Assembly's policy resolutions (WHO, 1988; WHO, 1991), instruments for research and evaluation of traditional medicine (WHO,

2000), and most recently a strategy on traditional medicine (WHO, 2002). In synchrony with a growing number of local initiatives in different countries of Sub-Saharan Africa, the joint United Nations programme to combat HIV/AIDS (UNAIDS) is also exploring and endorsing the need to improve the whole HIV/AIDS care response though fostering the use of medicinal plants and enhancing traditional healthcare systems (King, 2000). In addition, regional initiatives and South-South co-operation in the non-governmental sector are equally emerging (Bodeker *et al.*, 2000). However, there is still much to progress to achieve for the effective integration of medicinal plants and the associated indigenous healthcare knowledge in healthcare responses in rural Africa, especially through policy-making, healthcare services, research programmes, and rural healthcare development plans. The collaboration between the agricultural and health sectors is indispensable for this progress.

Medicinal plants represent unique biodiversity resources with notorious relevance in healthcare among the rural poor in Africa. Traditional healers constitute the principal actor in the use of medicinal plants for healthcare, as they hold knowledge on medicinal plant use and they are legitimised healthcare practitioners in their communities. Overall, medicinal plant diversity and the associated indigenous healthcare knowledge represent affordable and locally available means to address many diseases and health problems, such as those related to HIV/AIDS. They are notably important for the rural poor, who often lack other healthcare support options. Overall, medicinal plants provide a number of therapeutic, cultural, and economic values in rural Africa, especially as follows:

- Medicinal plants are often useful and effective resources for healthcare.
- Medicinal plants are at the core of primary healthcare systems at the rural community level, and rural people commonly use and trust them.
- Medicinal plants are affordable and available compared to other healthcare resources, when not the only healthcare resources available for the rural poor.

In Sub-Saharan Africa, the use of medicinal plants is connected to traditional healers. In fact, the number of traditional healers far outnumbers that of modern, Western-educated doctors (table 13). The importance of traditional healers and the reliance on medicinal plants is more manifest in rural areas, as modern healthcare systems are more limited and even declining, whilst the environment facilitates the access and use of medicinal plants.

Table 13. Healthcare in Africa: Modern doctors and traditional healers

Country	Population	HIV infection rate (%)	Estimated number of modern doctors	Estimated number of traditional healers	Ratio
Ghana	20,000,000	5	1,200	50,000	1 / 42
Zambia	10,000,000	> 20	900	40,000	1 / 44

Comments: "Modern doctors" refers to Western-educated doctors. In Zambia, about 70% of the 900 modern doctors are foreign. The *ratio* in the last column indicates "modern doctors *versus* traditional healers".

Source: Naur (2001).

Medicinal plants and HIV/AIDS

Traditional healers hold knowledge and experience on a wide range of medicinal plants that are useful to address a variety of AIDS-related health issues and problems (box 27). In particular, they highlight herbal treatments relevant for skin diseases, respiratory infections, diarrhoeal disorders, mouth problems, fever, loss of appetite, and weakness, among others. For instance, a healer from Bukumankola village, in Kamuli district (Uganda), emphasises that the leaves of *katoko* plant are useful for treating skin problems (Monica Kasaja, per. com., 2001). Another healer from the same district, but in Budini village, indicates that *muzanganda* plant is effective to raise appetite and support health strength in AIDS patients and others, to the point that he has been cultivating it in his herbal garden since the mid 1990s due to increasing need and use (David Mwire, per. com., 2001). In addition, traditional medicines and local healthcare knowledge may prove particularly useful to address locally specific diseases, which are likely to become exacerbated by AIDS, yet ignored in national healthcare systems.

Box 27. Roles of medicinal plants in combating HIV/AIDS

Medicinal plant diversity and the associated indigenous healthcare knowledge provide locally available and affordable means to address a wide range of health concerns related to HIV/AIDS, particularly as follows:

1. Herbal treatments to heal sexually transmitted diseases, thus reducing the risks of HIV infection and re-infection.

2. Herbal treatments to support immune strength and sustain an overall health well-being, thus serving to control the progression of HIV infection and to mitigate the potential impact of opportunistic diseases.

3. Herbal treatments to raise appetite, since loss of appetite is a frequent problem in AIDS patients that causes a downward cycle of malnutrition, weakness, and sickness.

4. Herbal treatments to address a number of HIV/AIDS associated and opportunistic diseases, such as respiratory infections, diarrhoeal diseases, and skin problems.

Source: Field research, including contributions from traditional healers, Uganda, 2001.

Embutamu plant, used to treat gastrointestinal problems (Uganda).

Traditional medicinal plants and indigenous healthcare knowledge therefore represent a strategic force in healthcare action, capable of complementing modern healthcare systems. In addition, they are often the only healthcare option available or affordable in rural areas, as modern healthcare services are often missing, deficient or expensive. Accordingly, the healthcare response to HIV/AIDS in rural Africa has much to benefit from the conservation, use and improvement of medicinal plants and herbal treatments. This requires mobilising indigenous healthcare knowledge, empowering traditional healers, and fostering the co-operation between traditional and modern healthcare systems. The collaboration between the agriculture and health sectors around medicinal plants is equally valuable to enhance the healthcare response to HIV/AIDS in rural communities of Africa.

Female healer with a sample of *katoko*, which is a medicinal plant used against skin diseases (Uganda).

The organisation THETA in Uganda

In Sub-Saharan Africa, there is a growing number of grassroots efforts to promote medicinal plants, improve local herbal treatments, and support traditional healers as a community-based strategy to mitigate HIV/AIDS health impact (King, 2000). Non-governmental organisations and community-based initiatives are the leading forces in this innovative work that recognises the role of traditional medicine and aims at the joint collaboration between traditional and modern healthcare practitioners. Organisations and initiatives such as THETA in Uganda and Tanga AIDS Working Group in Tanzania are pioneering examples. A Regional Task Force on Traditional Medicine and HIV/AIDS in East and Southern Africa has been also established (Bodeker *et al.*, 2000). In addition, the World Health Organisation, UNAIDS, the World Bank and other international development agencies are increasingly supporting these neglected but emerging initiatives for enhancing healthcare among the poor through traditional medicine. The agricultural sector is due to become a crucial partner for this endeavour, particularly as it matters the conservation, use and expansion of medicinal plants.

Among these initiatives, the organisation THETA ("Traditional and Modern Health Practitioners Together against AIDS and other diseases"), in Uganda, has led a pioneering mobilisation around medicinal plant use, traditional healthcare, and community-based healthcare approaches. Their activities and approaches illustrate the potential of working around medicinal plants and indigenous healthcare systems. The organisation THETA emerged in response to the scale of HIV/AIDS health crisis and to the enormous deficiency in modern healthcare instruments in rural Uganda. It carries out an innovative effort to promote the use of medicinal plants and to strengthen community healthcare capacities to combat HIV/AIDS epidemic and other priority health concerns among the rural poor. It concentrates on three inter-related issues with a priority focus on the HIV/AIDS epidemic, as follows:

1. Medicinal plants: conservation, use and research.
2. Traditional healers: Training, organisational aspects and empowerment.
3. Increased collaboration between traditional and modern health practitioners.

Concerning medicinal plants, THETA is advancing two major initiatives: (i) the creation of a medicinal plants garden, and (ii) the conduction of clinical research on specific medicinal plants used by traditional healers to address AIDS-related health issues.

THETA and the Pharmacology Department of Makerere University in Kampala (Uganda) have jointly established a medicinal plants garden for the purposes of conservation, research and demonstration. This herbal garden is located in Bujuuko village, in the Central Region of Uganda, and comprises about 1 ha of land. It contains over 80 species of potentially useful plants in the treatment of diseases and health problems, including specifically, but not limited to those related to HIV/AIDS. The medicinal plants garden serves three main purposes: (i) to promote the conservation, recognition and institutionalisation of medicinal plant resources; (ii) to test the domestication viability of some medicinal plants, so to increase their use, reduce the time spent by traditional healers in harvesting them into the bush, and prevent their depletion in natural habitats owing to increased use; and (iii) to facilitate research on medicinal plants. In essence, medicinal plants gardens represent an advantageous strategy for the conservation, use, research, and promotion of medicinal plants.

Entrance to THETA's Medicinal Plants Garden
in Bujuuko village (Central Region, Uganda).

THETA is also conducting a pioneering clinical research on the effectiveness of some traditional medicinal plants in specific AIDS-related diseases (table 14). This clinical research has been conducted jointly with the Pharmacology Department of Makerere University. It initially focused on a selected group of medicinal plants that healers use to treat skin problems (such as particularly herpes Zoster) and diarrhoeal diseases, which are two major AIDS-associated diseases for which available modern treatments seem to be poorly effective. The preliminary results of clinical research show not only that many of such medicinal plants are useful to treat either both herpes Zoster or AIDS-associated chronic diarrhoea, but that they are even more effective than existing modern treatments. Effectiveness might even increase when these medicinal plants are used by local healers themselves, who generally apply a combination of medicinal plants rather than a single medicinal plant alone.

Table 14. Medicinal plants and HIV/AIDS

Ugandan medicinal plants that prove useful to treat herpes Zoster and diarrhoea, which are two major diseases associated with HIV/AIDS [1]

Local name [2]	Scientific name [3]	Plant group	Medical use
Akasogaasoga	*Ricinus communis*	Euphorbiaceae	Herpes Zoster
Kibwankulata	*Iboza multiflora*	Labiatae	Herpes Zoster
Lukandwa	*Securinega virosa*	Euphorbiaceae	Herpes Zoster
Luwoko	*Phytolacca dodecandra*	Phytolaccaceae	Herpes Zoster
Mutulika	*Phyllanthus guineensis*	Euphorbiaceae	Herpes Zoster
Embutamu	*Hydrocotyle mannii*	Umbelliferae	Diarrhoeal diseases
Enkami	*Priva cordifolia* [4]	Verbenaceae	Diarrhoeal diseases

1. After clinical studies, these medicinal plants used by traditional healers in Uganda have proven useful in treating two HIV-related diseases (herpes Zoster and chronic diarrhoea), even more effectively than available modern treatments.
2. Luganda language.
3. Provisional taxonomic identification, revised according to the *International Plant Name Index*.
4. Variety *flabelliformis*.

Sources: Clinical research carried out by the organisation THETA and the Pharmacology Department of Makerere University, Kampala, Uganda. Internal data sources from THETA. Personal communications with Claire Nsubuga (co-curator of THETA's herbal garden), Joseph Tenywa (manager of THETA's resource centre), and Dominic Mwebe (traditional healer). Uganda, 2001.

Three medicinal plants that are used and effective to treat skin problems and, particularly, herpes zoster: *kibwankulata*, *akasogaasoga*, and *luwoko* (Uganda).

THETA is also addressing supplementary issues around the optimal use of medicinal plants. In particular, it is exploring options for the production and commercialisation of medicinal plants, so to expand the use of medicinal plants into urban populations, which would simultaneously expand income opportunities in rural communities. In addition, THETA is exploring appropriate genetic resource management aspects on medicinal plants, including specific seed policy issues and the integration of medicinal plants in formal seed-banks.

Along with the support for the conservation and use of medicinal plants, THETA fosters grassroots mobilisations around healthcare, particularly through empowering traditional healers to enhance community healthcare responses to HIV/AIDS. The most relevant efforts are the training of traditional healers and the promotion of associations of traditional healers. Under the lead of THETA, the emerging associations of traditional healers in Uganda are institutionalising, improving and strengthening traditional healthcare and the use of medicinal plants. These associations are deeply oriented towards HIV/AIDS issues, but not limited to them. They conduct a wide range of activities, including training in improved traditional healthcare and in HIV/AIDS health issues, discussion on practices and treatments, exchange of medicinal plants and indigenous medical knowledge, community health awareness, local education on HIV/AIDS, collaboration with modern health practitioners, and deployment of initiatives for the conservation of medicinal plants (such as home herbal gardens). In addition, traditional healers and other grassroots health practitioners, such as midwifes, can also raise awareness and provide advice on nutrition and health issues to the broad community. In general, traditional healers constitute an important actor to strengthen community-based healthcare systems, to optimise the use of medicinal plants, and to advance collaboration between traditional and modern healthcare systems (box 28).

Box 28. Potential roles of traditional healers in HIV/AIDS mitigation

- Use of affordable medicinal plants and herbal treatments to address the health issues and diseases related to HIV/AIDS, such as opportunistic diseases, lost of appetite, and malnutrition trends.
- Community awareness and education on HIV/AIDS.
- Generate public spaces for the open dialogue and consideration of HIV/AIDS issues in the community.
- Community HIV prevention action, such as education, provision of condoms, and advise on sexually-transmitted diseases.
- Counselling to HIV infected people, including psychosocial support and nutrition advice.
- Explore collaboration with modern health practitioners and services.
- Carry out initiatives for the exchange of medicinal plants, knowledge and experiences of relevance to HIV/AIDS through networking and associating with other healers.
- Conduct initiatives for the conservation of medicinal plant diversity and the effective transmission of indigenous healthcare knowledge.
- Improve traditional healthcare practices through joint research efforts with scientists and modern doctors.
- Combat stigmatisation and discrimination around HIV/AIDS, exposing misleading assumptions around this epidemic and helping recognising the dignity of people living with HIV/AIDS.

Sources: Fieldwork in Uganda and Tanzania conducted in 2001; experiences of THETA in Uganda; and King (2000).

Concluding remarks

Medicinal plants represent useful and affordable resources to address some of the health problems associated to HIV/AIDS, particularly for poor people in Africa. They often represent the main, if not the only means for healthcare among the rural poor, since modern medical treatments remain inaccessible, unaffordable or deficient in rural Africa. Accordingly, the agricultural sector should consider, design and deploy strategies to foster the use of medicinal plants as part of the response to HIV/AIDS. Such strategies include conservation and research on medicinal plants, support to indigenous healthcare knowledge, improvement of traditional herbal treatments, and collaboration between traditional and modern healthcare systems. Suggested activities include as follows:

- Promote the participatory elaboration of inventories of medicinal plants used to treat health problems related to HIV/AIDS. Compare the use of these resources across regions and cultures. Train healers to keep records of the use and effectiveness of selected medicinal plants.
- Establish partnerships with universities and research centres to conduct clinical studies on the effectiveness and properties of selected medicinal plants of relevance in key health problems, including especially those related to HIV/AIDS.
- Create herbal gardens as spaces for conservation, demonstration, research and diffusion of medicinal plant resources. Promote home herbal gardens at the community level, supporting traditional healers and interested households in setting up these fields.
- Promote spaces for the dialogue and cooperation between traditional and modern health practitioners.
- Support and improve the healthcare role of traditional healers at community level, through training (from HIV/AIDS issues to improved traditional healthcare), creating associations of traditional healers, conducting actions to enhance the collaboration with modern doctors in the fight against HIV/AIDS, and encouraging spaces for critical exchange of knowledge around medicinal plants.
- Promote community education on the value and limitations of medicinal plants and traditional herbal treatments, generating critical thinking at the community level to foster the use of medicinal plants but also to reduce misassumptions and abuses.
- Develop policies and programmes that recognise the value of medicinal plants, the potential role of traditional healers, and the need to establish cooperation channels between traditional and modern health systems.
- Promote meetings and regional initiatives around medicinal plants and healthcare, in order to: (i) share inventories on medicinal plants that are used to address health problems related to HIV/AIDS, evaluating critically their effectiveness and means to further experiment and promote them; (ii) share methodologies and results from clinical studies conducted on medicinal plants; and (iii) share experiences on the mobilisation of traditional healers and on the dialogue/cooperation between traditional and modern health practitioners in the fight against HIV/AIDS.