THIMLICH OHINGA:
PRESERVING AN ENDANGERED HERITAGE

KEFRI/IFRI-KENYA PROJECT COMMUNITY BRIEF: NO. 2
THIMLICH OHINGA FOREST:

Preserving an endangered heritage

by

Paul O. Ongugo, Jephine N. Mogoi and Emily Obonyo Kamau

With contribution from: Gordon Sigu and Tom Omenda

Kenya Forestry Research Institute (KEFRI)
International Forestry Resources and Institutions-
Collaborating Research Centre Kenya (IFRI CRC-K)
P.O. Box 20412 - 00200
NAIROBI, KENYA
e-mail: ifrikenya@kefri.org
Website: www.ifrikenya.org

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Cover photo: Entrance to Thimlich Ohinga stone structure
Pictures courtesy of IFRI Team members
Illustrations done by Charles Nyogot
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PREFACE

The Kenya Forestry Research Institute (KEFRI) was established in June 1986 by an Act of Parliament to undertake forestry research and development in Kenya. The mandate of the institute is to conduct research in forestry, disseminate research findings, co-operate with other research bodies within and outside Kenya carrying out similar research and to liaise with other organizations and institutions of higher learning in training and on matters of forestry research.

KEFRI implements its research through five research programmes: Farm Forestry, Natural Forests, Dryland Forests, Plantation Forests, and, one Service Programme dealing mainly with information documentation and dissemination. KEFRI has six research Centres namely: Muguga, Karura, Kitui, Gede, Londiani and Maseno.

The KEFRI headquarters is located about 25km northwest of Nairobi city and two kilometers off the Nairobi-Naivasha Nakuru highway.

The International Forestry Resources and Institutions Collaborating Centre Kenya (IFRI CRC-K) was started in KEFRI in 1997 under the Natural Forests Programme. With funds from Ford Foundation, the IFRI CRC-K carried out studies on several sites all over the country to establish the status of the forests and institutions therein. By studying the intricate relationships between communities, resources and forests, the programme has recognised the role local communities play/or could play in the management of the forests. It studies the role of local institutions in the management of common pool resources such as forests and water catchments.

One of the sites established by IFRI CRC-K was Thimlich Ohinga forest in 2002. This is one of the unique cultural sites in Nyanza Province. This community brief highlights some of the major findings at the site and reports on the main problems experienced by the community and proposes some possible solutions to those problems.

By sharing this information with the community and other stakeholders, the IFRI programme aims at highlighting issues that would eventually influence policy makers in making decisions taking into consideration the community’s perspectives regarding forest resource utilization, conservation and management. It also trains the community members on nursery establishment, management and other techniques.
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1. INTRODUCTION

Kenya’s historical sites are part of its cultural heritage and should therefore be conserved, and passed on to future generations. Most of the historic sites are conserved in order to preserve the national heritage which may include natural forests, extra ordinary stone arrangements, specific cultures and works of art. Such historical sites include Thimlich Ohinga and Kit Mikayi in Nyanza, Fort Jesus and the Khayas at the Coast and Mukurwe wa Nyagathanga in Central Kenya. The Thimlich Ohinga site is preserved due to its rich natural heritage including the history of the people who lived in the area over the years, the artifacts associated with the people and the natural trees (Thimlich Ohinga forest) which have remained intact mainly due to the existence of the stone structures. Many organizations including the National Museums of Kenya, have come up with ways of conserving such sites.

2. THIMLICH OHINGA SETTLEMENT

Thimlich Ohinga forest is located in Migori District of Nyanza Province (Map 1). Thimlich Ohinga structures serve as an example of the dry stone enclosures widespread in Homa bay and Migori Districts of Western Kenya. Thimlich Ohinga structures which are similar in construction to the well-known ruins of Great Zimbabwe in Southern Africa represent some of the finest examples of stone structures in East Africa.

Figure 1: Members of Thimlich Community during IFRI PRA meeting
Map 1: Research Area and the extent of stoned structures

Legend:
- Extent of structures
- Altitude 914 - 1524m
- Altitude 1524 - 2134m
- Kenyamkago Hills

Scale- 1: 50 000KM
A study carried out by the National Museums of Kenya (NMK), classified the areas with a high concentration of stone structures in Migori and Suba districts into four regions: Macalder, Homa Bay, Karungu South and Karungu North. The Luo refer to these stone structures as *ohinga/Ohingni* (plural) meaning high walls that are impossible to climb. Thimlich Ohinga is in the Macalder region, which has the highest number of stone structures in the country.

![Figure 2: Entrance to the Thimlich Ohinga](image)

About 46 kilometres northwest of Migori town in Nyanza Province lie these striking stonewall enclosures (Figure 2) nestled among the trees and shrubs of a gently sloping hill. From a distance the hill seems more like a forest, with *Euphorbia candelabrum* towering above all the other trees and shrubs. From here, one can tell why the hill got its name, "Thimlich" (Luo) which literally means ‘a frightening dense forest’. Within stone enclosures whose architecture is not only captivating but unique are the typical traditional Luo hut and the forest which is both within and outside the stone enclosures. The Thimlich forest is well preserved with only occasional illegal harvests.

From the Participatory Rural Appraisal (PRA) carried out by the IFRI team, the historical background of the forest dates back to before 1920s when Thimlich Ohinga was occupied by various ethnic groups mainly the Nilotes and Bantus. In 1924, the Kanyamwa clan moved into the forest led by Mzee Ochieng’ Okoth from Ndhiwa Division (Table 1). They started farming and rearing livestock in the surrounding plains. Most of the trees were cut down during this time. More people from the Kadem and the Kanyamkago clans moved to settle in the forest following Mzee Ochieng’s successful farming and livestock keeping activities.

From the early Stone Age, Thimlich Ohinga was a community forest managed for its cultural importance by the Kadem, Kanyamwa and Kanyamkago clans. Until 1924, these communities believed that the forest and the stone fortress provided shelter for their ancestors during periods of clan fights and attacks by wild animals. Afterwards more communities migrated to the area and people stopped building the stone structures. The site with its captivating cultural heritage and forest remains one of the greatest attractions to both tourists and scientists alike in the whole of Nyanza.
The Government through the NMK took over the forest in 1982 and declared it a National Monument. The NMK has since restored the walls, made picnic sites, cleared trails, constructed a ticketing office and a model Luo homestead. The whole forest area is now fenced and conserved as a National Archaeological Monument that is a tourist attraction.

Table 1: Major changes experienced since the 1920s and reason for the changes.

<table>
<thead>
<tr>
<th>Year</th>
<th>Status of the forest</th>
<th>Major changes in the settlement</th>
<th>Impact of the changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before 1920's</td>
<td>Existence of a primary forest</td>
<td>Habitation by various ethnic groups mainly bantus.</td>
<td>-</td>
</tr>
<tr>
<td>1924</td>
<td>Existence of a primary forest</td>
<td>-Mzee Ochieng Okoth with his family settles in the surrounding areas -People repair existing stone walls -They build other stone structures for protection</td>
<td>-Some trees are cut to allow settlement. -Increase of stone structures in the area. Wild animals migrate to other areas.</td>
</tr>
<tr>
<td>After 1924</td>
<td>Area relatively forested</td>
<td>More clans i.e Kadem, Kanyamwa and Kanyamkago migrate to the area.</td>
<td>Mzee Okoth's successful farming attracts more people thus more trees cut.</td>
</tr>
<tr>
<td>1962-1980's</td>
<td>-Decreasing area of forestland. -Development of secondary forest</td>
<td>More settlements and population growth</td>
<td>Depletion of primary forest and development of secondary forest.</td>
</tr>
<tr>
<td>1982 to date</td>
<td>-Depleted forest cover, forest mostly secondary</td>
<td>Gazzettment of forest and stone structures and declaration of site as a National Monument</td>
<td>-Local people allowed limited access to the forest. -Rehabilitation of forest and stone structures.</td>
</tr>
</tbody>
</table>

2.1 The Thimlich Ohinga Community

The Thimlich Ohinga community exclusively comprises of the Luo who have lived there since the 1920s. The Luo migrated along the River Nile to settle at its source in Lake Victoria.

According to recorded history, the Luo evolved as an independent group in about the year A.D 1000. They occupied the areas around upper Nile, in the southern part of Sudan. The group’s livelihood was through nomadic cattle raising and fishing. The Luo managed population pressure by migrating to new uninhabited areas or by acquiring land from other tribes. In so doing, they pushed their influence further south along the Nile to eventually settle along the shores of L. Victoria.
A typical Luo family including that of the Thimlich Ohinga community lives in an enclosed place (*pacho*), together with their livestock. A typical Luo homestead is occupied by a polygamous, extended family, with each wife and children forming separate households. The *pacho* (home) consists of a stretch of land enclosed by a fence that has a main and a secondary entrance. The hut of the head of the homestead is located at the centre of the *pacho*; this is where all male members of the family entertain guests and take meals. By the sides of the main entrance are huts of adult male sons, both the married and unmarried. The huts of the wives are arranged according to seniority in the upper part of the pacho with that of the first wife being at the centre followed by the second and the third respectively on the left and the right hand sides of the first wife’s hut. This is well demonstrated within the Thimlich site.

The Thimlich community regard the Thimlich forest as a sacred place and respect it since they believe that their ancestors are buried in this forest. The community have planted medicinal plants in the forest and use the plants to treat various diseases and ailments. This has enhanced further, the conservation status of the forest.

The Thimlich Ohinga community consists of 3,500 individuals in 600 households. Most of the residents derive their basic income from subsistence farming and livestock keeping.

### 2.2 The Thimlich Ohinga stone structures and forest conservation

The stone enclosures played an important role in protecting the forest over time. They were a substitute material for fencing; people used stones instead of the normal fencing poles and posts. This contributed towards the conservation of the forests.

The stone structures are protective forts for the forest since they surround and enclose part of the forest. This discouraged indiscriminate use of the forest because it’s access was limited to a particular group of people.

### 2.3 Importance of the forest to the community

#### 2.3.1 Products

The Thimlich Ohinga Community obtains some products from the forest despite the forest having been taken over from the community by the National Museums of Kenya. Products obtained from the forest by the communities include sisal, firewood, grass and medicinal plants.
Table 2: Ranking of forest product importance by different members of the community

<table>
<thead>
<tr>
<th>Products harvested from the forest</th>
<th>Products harvested by women</th>
<th>Products harvested by men</th>
<th>Most important products to community</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Firewood*</td>
<td>Firewood*</td>
<td>Firewood*</td>
<td>Firewood*</td>
</tr>
<tr>
<td>2 Charcoal*</td>
<td>-</td>
<td>Charcoal*</td>
<td>-</td>
</tr>
<tr>
<td>3 Medicinal Plants</td>
<td>Medicinal Plants</td>
<td>Medicinal Plants</td>
<td>Medicinal Plants</td>
</tr>
<tr>
<td>4 Grass*</td>
<td>Grass*</td>
<td>Grass*</td>
<td>Grass*</td>
</tr>
<tr>
<td>5 Sisal*</td>
<td>Sisal*</td>
<td>Sisal*</td>
<td>-</td>
</tr>
<tr>
<td>6 Game meat*</td>
<td>-</td>
<td>Sisal*</td>
<td>-</td>
</tr>
<tr>
<td>7 Fodder*</td>
<td>Fodder*</td>
<td>Fodder*</td>
<td>-</td>
</tr>
</tbody>
</table>

*Products harvested from the forest illegally

The forest cover has reduced mainly due to activities such as charcoal burning and population growth, which increases need for wood and grass for construction. These are harvested illegally from the forest.

The forest cover has also reduced due to accidental fires.
2.3.2 Tourism
The Thimlich forest is one of the major tourist attractions in Nyanza Province. Its ancient stonewalls and the scenery attracts visitors from all over Kenya and many parts of the world. Tourists began visiting the site in 1982 when it was declared a National Monument.

However the logistics for revenue collection have not yet been put in place although the ticketing office has been built to collect entry fees. When a proper revenue collection system is established, the money collected could benefit the community and be used to improve infrastructure, such as roads, hospitals and schools in the area.

2.4 Associations in Thimlich Ohinga
The community is involved in the management of the forest through the Got Olasi Youth Farming and Tree Nursery Association. The association was formed in 1994 by voluntary youth upon the realisation that fuelwood was getting scarce. The Association was registered in 1996. This Association established a tree nursery and distributed seedlings to the community for planting on their farms.

The Association has coordinated several activities such as raising of tree seedlings, developed appropriate technologies for extracting forest products, monitored forest status, crafted and enforced rules for the governance of their association. The association also hires people to plant trees and raise seedlings, protect the nursery, enforce association rules, keep records on nursery seedling sales and solicit for funds (Figure 5).

![Seedlings in a nursery](image)

Some of the members of the community have adopted more efficient wood burning stoves (Figure 6) to economise on the amount of firewood used. Some have reduced their dependency on the forest by adopting on farm tree planting practices.
2.5 Major problems facing the Thimlich Ohinga Community

Major problems facing the Thimlich Ohinga community include the following:

(a) Access to the Forest: The community has been denied access to the forest as a result of its gazettement. This has forced the people to depend highly on forest resources in some cases illegally.

(b) Poverty: High poverty levels in the area

(c) Wildlife conflict: There are many monkeys, wild rabbits/hares and birds living in the remnant forest, which destroy crops on the farms bordering the forest leading to conflict between the community and NMK.

(d) Land Compensation: The issue of compensation for the fertile land bordering the forest that had been taken over by NMK is also a perpetual cause of conflict. Many people still claim ownership of the forest since they have not been fully compensated for the loss of their land and forest to NMK.

2.6 Suggested Solutions to the problems affecting forest management

(a) Access to the Forest: The problem of access to the forest can be solved through various ways including:

(i) Conducting seminars to sensitize the community on the importance of the forest, including their involvement in the decision making processes regarding revenue collection and forest access.

(ii) Liaising with the community and other stakeholders to set up tree nurseries for rehabilitating the forest and planting on their farm holdings.

(iii) Promoting on farm tree planting to help reduce dependence on the forest by the farmers.

(b) Poverty: The community in collaboration with the NMK should ensure proper management of the forest to improve eco-tourism. The revenue collected from the activity could be shared between the government and the community. The local people could then be employed to manage tourism activities. This will act as an incentive for the community to conserve the forest.
(c) Wildlife Conflict: The government should offer compensation for any crops destroyed by wild animals. NMK should introduce electric fences to keep away monkeys from the crops.

(d) Land Compensation: NMK should work with the members of the community to find an amicable solution to the land compensation issue.

3. WAY FORWARD

(a) Although the gazettement of the forest has resulted to an improvement in the condition of the forest, the local community should be involved in its management. This will reduce the existing conflict between the NMK and the community. The community should use the indigenous knowledge they have developed over the years to help the government manage the forest better.

(b) The community should contribute to the management of the site by integrating their culture with modern management skills. This will ensure that Thimlich Ohinga is recognized for both its cultural and commercial values.

(c) As a long-term goal, training in better forest management could be extended to the general public, especially the youth at different levels of the school education system.

(d) The community and the government should embark on major repair work on the stone walls and a mechanism be put in place for regular inspection and maintenance of the walls. An adequate and appropriate number of staff preferably the local people need to be stationed at the site. There should also be a good perimeter fence and an education center from where information on the forest can be obtained and subsequently disseminated to the general public.

(e) The community should be encouraged to invest in other income generating activities such as bee keeping (Figure 7) in order to diversify livelihood sources.

(f) Community members should plant trees on their farms in order to reduce their dependence on the forest.
Figure 7: Beehives for bee keeping
ANNEX I: REQUIREMENTS FOR ESTABLISHING A SUCCESSFUL TREE NURSERY

Site of nursery

A tree nursery should be located in an area with the following characteristics:-

1. Reliable water supply
2. Level ground
3. Easily accessible by vehicles
4. Free from frost
5. Sheltered from wind

A nursery should not be located at a hilltop since transport will be difficult or the valley since the area can be water logged. The nursery should as much as possible be surrounded with a live fence to help reduce water loss from seedlings by the fence acting as a windbreak.

To produce 200,000 seedlings, a 100m long and 20m wide nursery is necessary, while 100m by 50m will be necessary to raise 500,000 seedlings.

A standard nursery layout should have a shed, seed sowing bed, soil storage area, soil mixing area and seedling beds (Figure 8)

![Diagram of nursery layout]

- A - Shed
- B - Seed Sowing bed
- C - Soil Storage
- D - Soil Mixing area
- E - Seed beds
- F - Live fence
- G - Store*
- H - Pit latrine*
- I - Water tank

*These items are not mandatory, in cases where the nursery has been established near homesteads, the already available store and latrine can be used. Water tank though mandatory can also be shared with the homestead.
Seed sowing bed facilitate the sowing of the fine seeds of tree species such as eucalyptus and casuarinas that cannot be sown individually into separate tubes. However large seeds can be sown directly into tubes and containers.

The sides of a seedbed should be 15cm (6 inches) above the ground with the bottom 5 cm made up of broken stones, the next 2.5 cm filled with gravel and the top 7.5 cm filled with river sand. Sawn timber, bamboo or logs of at least 17 cm are placed so as to make a seed sowing bed of the desired length. Wooden pegs are used on the outside to hold the timber, bamboo or logs in place, while the stones, gravel and sand hold them from the inside (Figure 9).

![Figure 9: Seed sowing bed](image)

Plant nutrients in the seedbed should be supplied to help the seedlings attain pricking out height to be transferred from the sowing bed to a seedlings bed. It's not advisable to use soil in a seedbed as it may result in water logging which kills seedlings. Therefore, sand, charcoal dust or saw dust is used. Sand should not be filled to the top of the bed or container. A space of 2 to 3 cm should be left at the top (Figure 10).

![Figure 10: Soil Profile of a seedbed](image)

Seeds should be covered with a layer of sand twice their size and ensure no seed is visible. Seeds should be sown during the dry season when there are no seeds of weeds and when the watering can be regulated. A tree branch for watering should be used to avoid splashing the sand and the seed. Cover the sowing bed with mouse wire to keep off the mice and the birds. Inspect the bed daily and cover any exposed seed. The seed may take 1-4 weeks to germinate depending on the soil and the area.
Nursery Soil

Soil should be collected from the indigenous forest but never below 15 cm and not from cultivated land. The soil should be kept in the nursery for at least 2 months before use to give the weed seeds time to germinate and thereafter die through the processes of watering and turning over the soil.

The forest soil should be sieved before it is mixed with other ingredients to eliminate parts of trees or stones. Nursery soil is usually composed of the following ingredients:

1. 5 parts of Forest soil
2. 1 part of compost manure e.g. cow dung manure
3. 1 part of Crushed stones
4. 1 part of Clay crushed to 0.5 cm particles
5. 1 part of Pine soil (when raising pine seedlings)

To every cubic meter of soil mixture, 2 kgs (the equivalent of a big tin of Kasuku or Kimbo) of nitrogen, phosphorus and potassium (NPK) fertilizer is added and thoroughly mixed. When raising pine or casuarina seedlings, soil obtained from under these trees is also added since such soil contains micro-organisms required for the development of the tree species. In absence of the above, fertile top soil can be used with addition of manure.

The soil is then put in a seedling bed, polyethylene tubes or other containers, perforated to allow water to flow downwards to give the soil air for root development. Seedling beds are 18 cm high from the ground and 1 m wide. (Figure 11).

Polythene tubes can be 10 cm wide and 15 cm long when laid flat. For slow growing species like most indigenous trees, large tubes should be used (Figure 12).
IFRI/CRC-K – Building capacity of local communities to participate in Natural Resource Management

Other locally available containers can also be used. (Figure 13)

![Alternative seedling Containers](image)

**Figure 13: Alternative seedling Containers**

Soil is filled in the containers and firmed to allow 0.5 to 1 cm space at the top. Seedlings from the sowing bed are then planted in the containers. This is done when seedlings develop their first leaves. The seed sowing bed is watered before removing the seedlings to loosen the soil around the roots. The seedlings are then put in a water container to avoid drying up.

Before planting the seedling, cut a third of the long root and do not bury the stem in the soil when planting. However, slight deepening of the stem below the root collar does not interfere with seedling development. (Figure 14.)

![Planting seedlings into containers](image)

**Figure 14: Planting seedlings into containers**

In the figure 14 above, (a) is recommended while (b) is not recommended. Seedlings in containers should remain in the shed for 2 weeks, then taken out under light shade for 1 week and can be left without the shade. Seeds in a nursery are provided with shade and the amount of shade is reduced after 2 weeks, while all the shade is removed after another week (Figure 15).

![Shading pricked out seedlings](image)

**Figure 15: Shading pricked out seedlings**

Seedlings should always be watered, weeded and root pruned. Root pruning is done 6 weeks after planting and every four weeks thereafter to facilitate the development of a more fibrous root system. Watering of seedlings should be done twice a day; in the morning and in the evening when the sun has gone down.
Seedlings can also be put in greenhouses where the temperature, sunlight and moisture are regulated (Figure 16). Seedlings should be ready for planting when they attain a height of 4-12 cm depending on the species.

**Figure 16: Green House**

**Diseases and Insect Attacks**

The nursery heads or caretakers are expected to report outbreak of diseases and insect attack noticed on seedlings. Private farmers should make such report to the forest officers in their areas for advice.
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