MOUNT KENYA

KENYA

WORLD HERITAGE NOMINATION - IUCN TECHNICAL EVALUATION

MOUNT KENYA (KENYA)

1. DOCUMENTATION

(i) IUCN/WCMC Data Sheet (9 references)

(ii) Additional Literature Consulted: Kingdon, J. 1990. **Island Africa**. Collins; Ojany, F.F. et. al. 1991. Proceedings of the International Workshop on Ecology and Socio-Economy of Mount Kenya Area. 204p.; Bussmann, R.W. 1994. The Forests of Mount Kenya. PhD Dissertation. Bayreuth; Bussmann, R.W. 1996. Destruction and Management Kenya's Forests. **Ambio** 25(5); Davis, S.D. et. al. 1994. Centres of Plant Diversity. Vol I. IUCN; Young, T. 1984. Kenya's Indigenous Forests. WWF/IUCN. 41p.; Allan, I. ed. 1991. **Guide to Mount Kenya**. Mt. Club Kenya; Boy, G. and I. Allan. 1988. **Snowcaps on the Equator** Bodley Head; Amin, M. et. al. 1991. **On God's Mountain**. Camerapix; Coe, M. 1967. **The Ecology of the Alpine Zone on Mount Kenya**. Junk; Thorsell, J. 1997. Africa's Mountain Parks and Reserves. in African Mountain Association Meeting Proceedings UNU. In Press; Hastenrath, S. 1984. **The Glaciers of Equatorial East Africa**. Reidel. 353p.; Wass, P. ed. 1995. **Kenya's Indigenous Forests**. IUCN; Rheker, J.R. et. al. Bibliography of East African Mountains. 1989. Laikipia Report 13. University of Bern; Ojany, F. 1993. Mt. Kenya and its Environs: A Review of Interaction between Mountain and People in an Equatorial Setting. **Mt. Res. and Devel**. 13(3).

(iii) Consultations: 5 external reviewers, Kenya Wildlife Service Officials, Forestry Department, University of Nairobi scientists.

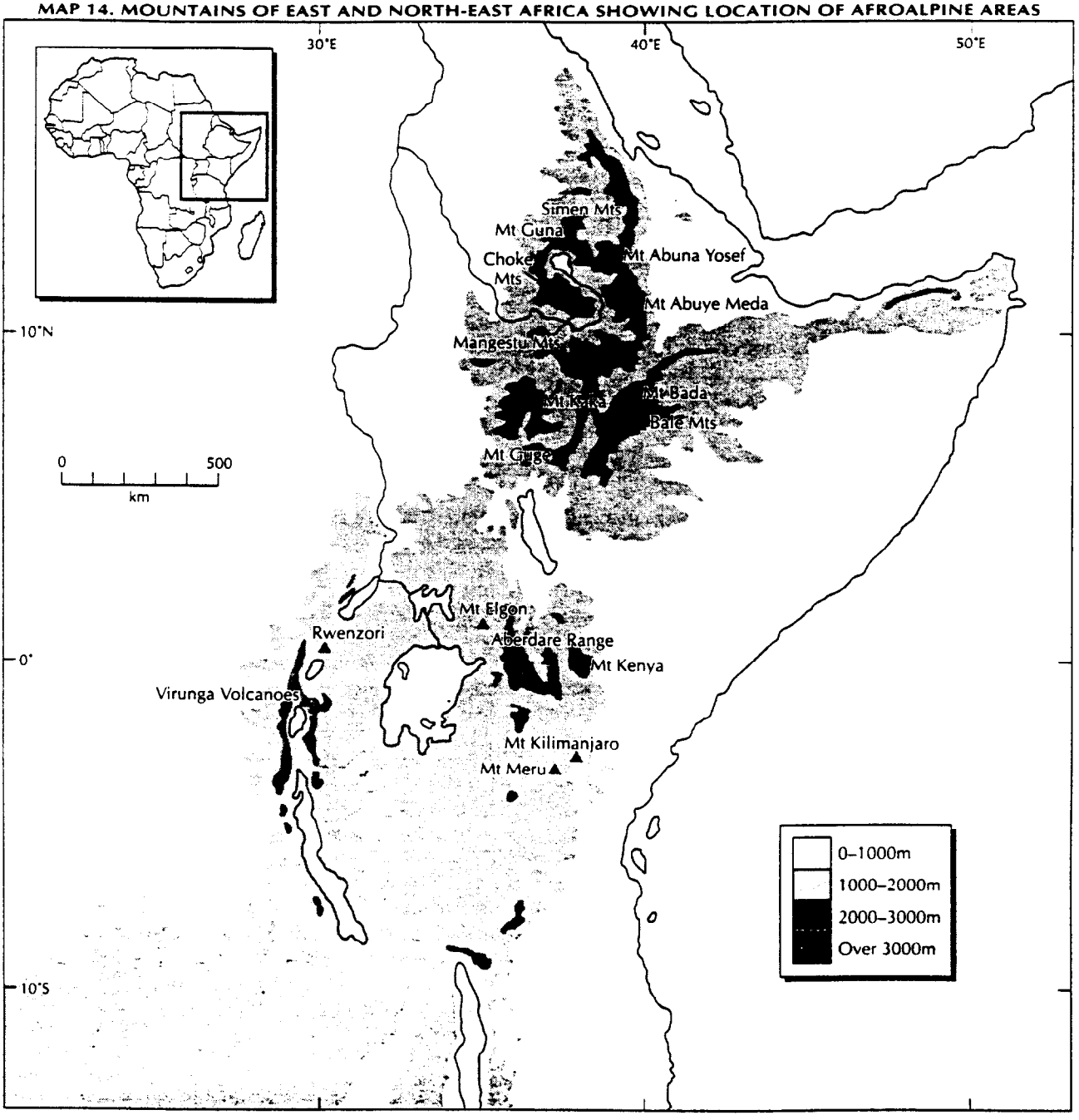
(iv) Field Visit: J. Thorsell, January, 1997

2. SUMMARY OF NATURAL VALUES

Mount Kenya, 5,199m is the second highest peak in Africa. It is an ancient extinct volcano where the period of activity was 3.1 to 2.6 mya when it probably rose to 6,500m with a shape resembling that of Kilimanjaro today. The summit of Mt. Kenya is the remnant of a volcanic plug which was left as softer materials were eroded by glaciation. There are 12 remnant glaciers on the mountain, all receding rapidly. Around the main summit there are a ring of four secondary peaks that sit at the head of deep U-shaped glacial valleys. There are a number of volcanic cones and craters on the northern side. Mt. Kenya is about 100km in diameter, and is about half the mass of Mt. Kilimanjaro. The area nominated includes the upper slopes of the mountain (above 3,200m) and two salients which make up the National Park (715km^2) and the surrounding Forest Reserve (1,420km^2). This forest zone extending up to 3,400m is both floristically rich and serves as an important faunal refuge (elephant, rhino, cape buffalo, primates). The montane forest zone merges into the timberline forest, then at higher elevations heathland, and afro-alpine moorlands. A large bamboo zone is found at moist intermediate elevations. Eleven strict endemics and 150 regional endemic plant species are found and one endemic animal (the mole shrew). About 20 small lakes exist and the mountain acts as a major watershed for two major river systems. The are nominated includes the National Park (715km^2) and the portion of the surrounding Forest Reserve that still has natural forest (approximately 1,110km^2) for a total size of 1, 824 km^2.

Criteria under which Mt. Kenya is being nominated were not specified but are imputed to be natural criteria (i), (iii) and (iv).

MAP 14. MOUNTAINS OF EAST AND NORTH-EAST AFRICA SHOWING LOCATION OF AFROALPINE AREAS



3. COMPARISON WITH OTHER AREAS

Mt. Kenya is one of the isolated mountain blocks of Africa that can be likened to an archipelago of islands of montane habitat separated by a sea of lowland forest and savanna. Throughout this archipelago some 40 protected areas have been established. In eastern and central Africa four World Heritage sites exist: Mount Kilimanjaro, Virunga, Rwenzori and Simen National Parks. All these areas are glaciated equatorial mountains and have many species in common. All have a different physiography with two of them being of volcanic origin (Kilimanjaro and Virunga) and two being uplifted sedimentary highland blocks (Rwenzori, Simen). The Virunga/Rwenzori is adjacent to the centre of plant endemism in eastern Zaire so vegetation communities are much richer rich in diversity than those in east Africa.

The entire Afromontane biogeographical unit is of exceptional biological and geological value for its distinct flora, fauna (to a lesser extent) and landform features. It is difficult, therefore, to rate their relative importance as all are scenically spectacular and are of great significance to conservation and all are unique in various ways. Mt. Kenya itself is distinctive from the others in that it consists of five rugged peaks as well as an extensive area of forest with a large bamboo zone and extensive moorlands. Its mountain forests are the most diverse in east Africa in regard to the richness of the different forest types. Unlike all the others it has rhinos and the highest number of elephants. It is scenically very impressive and has been regarded as a sacred mountain by neighbouring Kikuyu and Meru people.

4. INTEGRITY

The Mt. Kenya nomination consists of two administrative units: the Mt. Kenya National Park (715km^2) managed by the Kenya Wildlife service (KWS) and the Mt. Kenya Forest Reserve (1,420km^2) managed by the Kenya Forest Department. Both are equally important zones that are designed to protect the main natural values and the watershed of the mountain above the 2,000 - 2,500m elevations. Active protective measures for Mt. Kenya actually began in the early part of the 20th century with the national park established in 1949.

Current management of Mt. Kenya National Park is judged to be of a high standard. The park has a practical management plan which is being implemented with support from the European Union and others. New staff quarters and entrance gates have been completed with a loan from the World Bank. There is an active research programme and tourism is well-managed. Special plans for a fenced rhino reserve are being carried out and wildlife populations, though reduced from previous years, are still healthy.

The situation in the surrounding Forest Reserve is in sharp contrast to the high level of management existing in the National Park. During the field inspection IUCN observed the serious levels of encroachment that is taking place in the Forest Reserve. The inadequacies of management of the forest reserve have been graphically presented in the recent study by Bussmann (1996) and the problems are widely known within Kenya. Primarily the threats come from overharvesting of forest products and illegal removal of Camphor and Cedar. Some areas have been taken over by settlement and exotic plantations have replaced much indigenous forests. Marijuana plantations have destroyed much natural forest in the south-east of the Reserve and no attempts are being made to control their spread.

The destruction of the forest of Mt. Kenya is proceeding at an uncontrolled pace and there is little being done to stop it. Bussmann (1996) provides an action plan to address the situation but, with the Forest Department's capacity limited, little progress is being made.

5. ADDITIONAL COMMENTS

A review of forest policy and administration of natural forests is currently underway in Kenya. The results of the inquiry may affect the management of the portion of the property managed by the Forest Department.

A final map giving the details of the boundary of the site and size is still under preparation by the Kenya Wildlife Service.

6. APPLICABILITY OF WORLD HERITAGE NATURAL CRITERIA

Mt. Kenya with its rugged glacier-clad summits and forested middle slopes is one of the most impressive landscapes in eastern Africa and meets criterion (iii) for its "exceptional natural beauty." It has been the most studied alpine area in the region with, for instance, the Lewis Glacier being the only continuously monitored glacier in the tropics. The evolution and ecology of its afro-alpine flora have also attracted many scientists and criterion (ii) as an "outstanding example of ecological processes" is also met. The case for criterion (iv) is also strong, but, as other sites exceed it in this regard, this one is of secondary importance.

In terms of meeting the Conditions of Integrity for both criterion (ii) and (iii), the National Park portion of the site is only constrained by the lack of a significant extent of natural forest within its boundaries. The forested portion of the area nominated is managed by a different agency and as section 4 above indicates this area of Mt. Kenya has no management plan, is not being as well resourced as the National Park and there is extensive illegal removal of forest cover. The forest area, however, is crucial to the ecological survival of the National Park and is of major consequence for its watershed values. Recognising that the site meets two natural criteria but with the serious threats to the forest zone of Mt. Kenya. The Bureau referred the nomination back to Kenya to request a modification of boundaries to exclude the heavily impacted portion of the Forest Reserve and to outline what actions are being taken to strengthen its management.

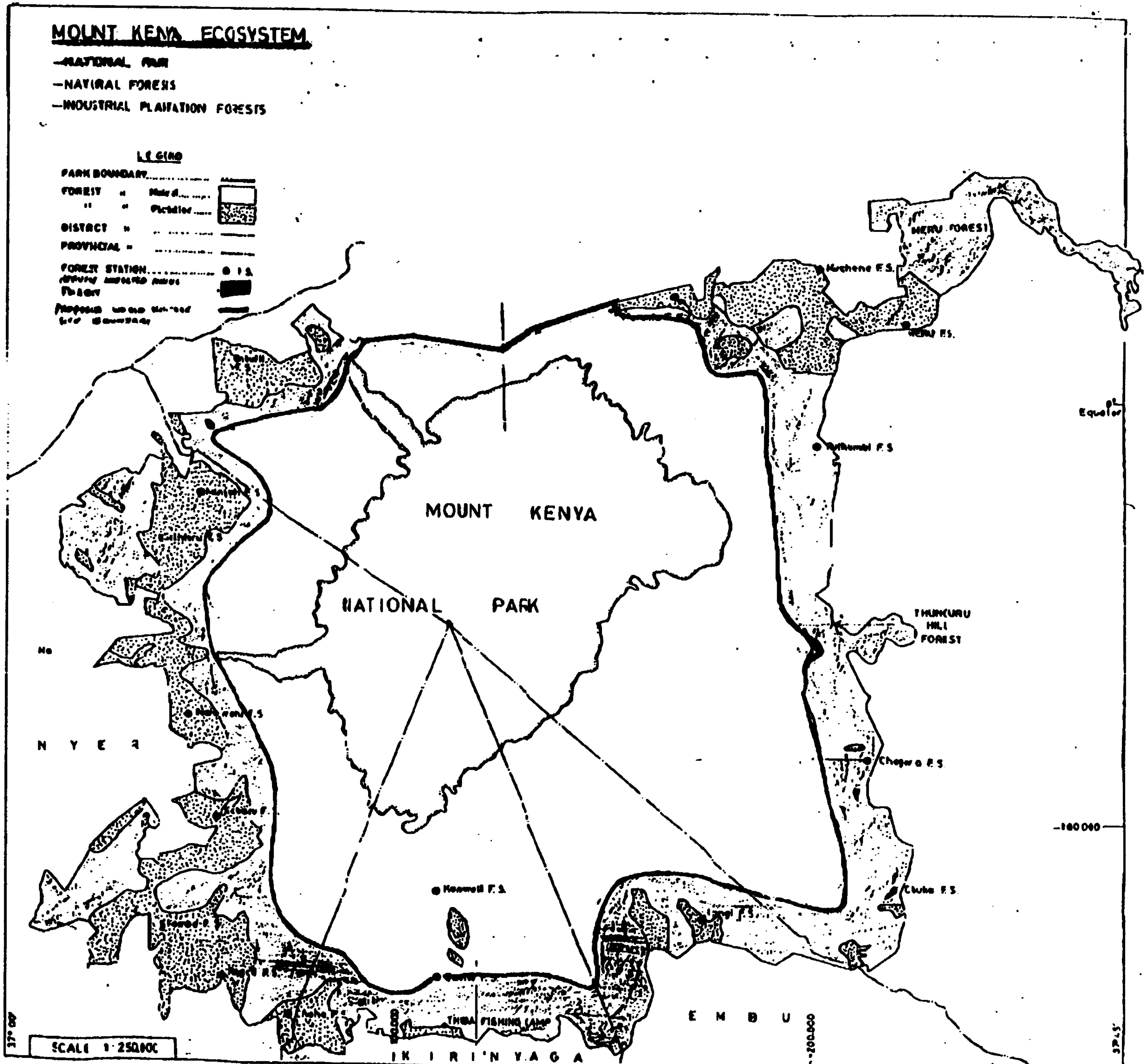
On 8 September the Kenyan authorities responded with a new map reducing the size of the site as requested and providing the list of actions being taken:

- a mobile operation base has opened at Nyeri;
- joint forest patrols are being undertaken by KWS and the Forest Department;
- funding is being provided for vehicles and operating expenses;
- an EU project has initiated a local community awareness and support project;
- training of Forest Department personnel is being provided;
- resource inventories are being undertaken to prepare the basis of the management plan; and
- revision of forest policy is in process.

IUCN feels that if these actions are implemented, the protection of the Forest Reserve will be much improved. The Committee may wish to monitor progress, however, and suggest that a review of progress in the site be undertaken in two years.

7. RECOMMENDATION

That the Committee inscribe the site under natural criterion ii and iii. The Kenyan authorities should be encouraged in their efforts to halt illegal activities in the Forest Reserve and asked to cooperate in a progress review of the site in 1999.


MOUNT KENYA ECOSYSTEM
—NATIONAL PARK
—NATURAL FORESTS
—INDUSTRIAL PLANTATION FORESTS
LEGEND
PARK BOUNDARY
FOREST
DISTRICT
PROVINCIAL
FOREST STATION
MERU FOREST
MOUNT KENYA
NATIONAL PARK
THUNGURU HILL FOREST
Equator
N Y E R
E M B U
K I R I N Y A G A
THIBA FISHING CAMP
Chogoria F.S.
Chuka F.S.
Kamweti F.S.
SCALE 1:250,000