## Information Sheet on Ramsar Wetlands

(RIS) - 2006-2008 version

Available for download from http://www.ramsar.org/ris/key\_ris\_index.htm.

Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8<sup>th</sup> Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9<sup>th</sup> Conference of the Contracting Parties (2005).

## Notes for compilers:

- 1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
- 2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2<sup>nd</sup> edition, as amended by COP9 Resolution IX.1 Annex B). A 3<sup>rd</sup> edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
- 3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

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2	2. Date this sheet was completed/updated:
2	23 <sup>rd</sup> January 2008:
- 3	3. Country:

FOR OFFICE USE	E ONLY.			
DD MM YY				
Designation date	Site Refe	rence N	umber	

The Republic of Uganda
4. Name of the Ramsar site:  The precise name of the designated site in one of the three official languages (English, French or Spanish) of the Convention. Alternative names, including in local language(s), should be given in parentheses after the precise name.
Rwenzori Mountains Ramsar Site
5. Designation of new Ramsar site or update of existing site:
This RIS is for (tick one box only): a) Designation of a new Ramsar site □; or b) Updated information on an existing Ramsar site □
6. For RIS updates only, changes to the site since its designation or earlier update:
a) Site boundary and area
The Ramsar site boundary and site area are unchanged:
or If the site boundary has changed: i) the boundary has been delineated more accurately ii) the boundary has been extended ; or iii) the boundary has been restricted**
and/or
If the site area has changed: i) the area has been measured more accurately ii) the area has been extended □; or iii) the area has been reduced** □
** Important note: If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.
b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:
7. Map of site:  Refer to Annex III of the Explanatory Note and Guidelines, for detailed guidance on provision of suitable maps, including digital maps.  features
<ul> <li>a) A map of the site, with clearly delineated boundaries, is included as: <ol> <li>i) a hard copy (printed from the electronic format) (required for inclusion of site in the Ramsar List): </li> <li>ii) an electronic format (e.g. a JPEG or Arc View image) </li> <li>iii) a GIS file providing geo-referenced site boundary vectors and attribute tables </li> </ol> </li> </ul>

#### b) Describe briefly the type of boundary delineation applied:

e.g. the boundary is the same as an existing protected area (nature reserve, national park, etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The proposed Rwenzori mountains ramsar site is located within Rwenzori mountains National park. The proposed site covers an area of 99,500 ha covered by the entire national park. The boundary of the proposed ramsar sites starts at an altitude of 1,646 metres above sea level and covers the snow line at an altitude of 5,091 metres above sea level.

#### **8. Geographical coordinates** (latitude/longitude, in degrees and minutes):

Provide the coordinates of the approximate centre of the site and/or the limits of the site. If the site is composed of more than one separate area, provide coordinates for each of these areas.

30°0' E, 0°25' N

#### 9. General location:

Include in which part of the country and which large administrative region(s) the site lies and the location of the nearest large town.

Rwenzori Mountain proposed Ramsar site, which is 99,500 ha is located in the three districts of Kasese, Kabarole and Bundibugyo, which are found in western Uganda. The largest administrative centres include Kasese town council, Fort-Portal Municipality and Bundibugyo town council with approximate populations of 66,600, 44,900 and 18,500 people respectively (2002 Census Report). The site borders the Democratic Republic of Congo (DRC) in the west). The mountain range out of which the Ramsar site has been proposed is much larger in size running over a hundred kilometers in the north-south direction and fifty kilometers in the east-west direction. Over 75% of the range is found in Uganda with the rest falling in the DRC. In the DRC the mountains are part of the Parc National des Virunga (PNV) and are contiguous with RMNP for about 50 km.

## **10. Elevation:** (in metres: average and/or maximum & minimum)

1,646 - 5,109 m above sea level.

## **11. Area:** (in hectares)

99.500ha

### 12. General overview of the site:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

In the 300 AD the Alexandrine geographer Claudius Ptolemy suggested that the Nile had its source from snow peaks on the Equator, the 'Lunis Montae' or 'Mountains of the Moon'. The Mountains of the Moon and other mysteries of the African interior were finally revealed to the world during the nineteenth century when European explorers penetrated the region. In 1888, H. M. Stanley while on expedition at the shores of L. George sighted the snow peaks of Rwenzori. Early mountaineers, most notably the Duke of Abruzzi in 1906, fighting upwards through dense forests of trees and bamboos, discovered a surreal landscape in which fantastic, giant forms of *Lobelia wollastoni* and *Senecio adnivalis* surrounded spectacular lakes and equatorial glaciers flowed down from the snow capped peaks.

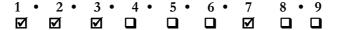
Since 1906, the Rwenzori Mountains have become a paradise for botanists and mountaineers alike. Research has revealed a wealth of endemic species in the range within a series of remarkable concentric, altitudinal, vegetation zones, unique to East African Mountains.

Parts of the Rwenzori Mountains above 2,200m covering about 995 sq. km were gazetted as Forest Reserve in 1941. The first forest management plan, written in 1948, prescribed strict protective management in view of the mountain's role as Uganda's largest and most valuable water catchment. A second management plan in 1961 continued to emphasize the importance of water catchment protection; however the extraction of traditional forest products such as firewood, bamboo, and specified types of timber was permitted.

Since the sixties, the mountains have been increasingly threatened by the demands of a growing population. Poachers have removed most of the large animals from the main valleys while cultivation of ever-steeper land below the protected area boundary caused serious soil erosion. Uganda was isolated during the Seventies and some of the Eighties by internal unrest. The return of stability in the late eighties, and renewed foreign visitation to the country, came at a time of massive international concern for environmental protection. National and international organizations and individuals noted and spotlighted the problems faced by the Rwenzori. This led to a *Proposal for the Establishment of a National Park in the* Rwenzori Mountains, Uganda (Howard, 1988), submitted to the Government of Uganda by the World Wildlife Fund/ New York Zoological Society (UWA, 1999). Later government appointed a team that held extensive consultations regarding the elevation of Rwenzori Mountains Forest Reserve to National Park status. Among the key stakeholders consulted were the communities, the majority of whom supported the proposal. The team produced a "Rwenzori Mountains National Park: Results of Public Recommendations for Establishment".

#### 13. Ramsar Criteria:

Tick the box under each Criterion applied to the designation of the Ramsar site. See Annex II of the Explanatory Notes and Guidelines for the Criteria and guidelines for their application (adopted by Resolution VII.11). All Criteria which apply should be ticked.



## 14. Justification for the application of each Criterion listed in 13 above:

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

# Criterion 1: Rwenzori Mountains contain important wetland bogs in Uganda with a unique macrophtye ecosystem.

As a result of the high rainfall (over 2000 mm annually) in most parts of the range on the Uganda side and the melting of the snow, numerous rivers flow from the mountains and many bogs (wetlands) and their associated plant and animal life are found in the mountains. The most abundant vegetation around the bogs is a tangled thicket about 5ft high of *Helichrysum stuhlmanni*, with white flowers that open quickly in any sunny period; at the higher altitudes the same species is only 1ft high, covered with white wooly hairs. Thickets of tree groundsels, *Senecio adnivalis* occupy gullies and other sheltered or well watered sites, and scattered individuals occur throughout the zone. *Carex runssoroensis* bogs are abundant in this zone

too, and small brilliant yellow or orange moss bogs occur at the highest levels. Giant *Lobelia* wollastonii is also common around the bogs of Rwenzori Mountains.

Moreover the entire Afro alpine ecosystem is unique, differing substantially from the small examples on the other drier East African mountains.

# Criterion 2: Rwenzori Mountain supports vulnerable, endangered, or critically endangered species or threatened ecological communities.

Kerbis et al (1998) notes that there are 21 species of small mammals that are Albertine rift endemics in Rwenzori Mountains. Three of these which are extremely rare include the, Vulnerable Ruwenzori Shrew, *Ruwenzorisorex suncoides*. Six of the 21 species are known to be endemic to Rwenzori Mountains. Amongst these are *Hybomys lunaris* (the vulnerable moon striped mouse, also known as the Ruwenzori Hybomys) and *Dasymys montanus* (the Vulnerable Montane Shaggy rat).

The IUCN Red List of threatened animals includes the, the elephant (*Loxodonta Africana*, VU), L'Hoest's monkey (*Cercopithecus lhoesti*, VU) and the Endangered chimpanzee (*Pan troglodytes*). The Vulnerable horse shoe bat (*Rhinolophus ruwenzorii*) is also found here (Schmitt, 1998).

The Rwenzori Mountains contains a total of 217 bird species that have been recorded and the list could increase with more surveys (Byaruhanga *et al* 2001). The park contains 5 globally threatened species with two vulnerable species Rockefeller's Sunbird (*Nectarinia rockefelleri*, VU) and Shelley's Crimson-wing (*Cryptospiza shelleyi*, VU).

# Criterion 3: Rwenzori Mountains support populations of plant and animal species important for maintaining the biological diversity of the region.

Kerbis et al (1998) notes that there are 21 species of small mammals that are Albertine rift endemics in Rwenzori Mountains. Six of the 21 species are known to be endemic to Rwenzori Mountains. These are *Myosorex blarina*, *Hybomys lunaris* (moon striped mouse, also known as the Ruwenzori Hybomys), *Dasymys montanus* (the Montane Shaggy rat), *Hylomyscus denniae* (the Montane Hylomyscus/moon mouse), *Praomys jacksoni montis* (Jackson's soft-furred mouse) *and Cephalophus rubidus* (the Ruwenzori duiker).

The Rwenzori Mountains support one of the most important bird communities in Uganda, with a total of 217 species recorded. Whilst this represents only a moderate level of species richness, the forest harbours many rare, threatened and endemic species. Rwenzori national park contains 17 restricted range species (Albertine endemics), second only to Bwindi Impenetrable National Park which has 24 species (Byaruhanga et al, 2001).

In a research study, Behangana observed that amphibians show high altitudinal stratification in terms of diversity and richness (Behangana, 1998). Some of the species recorded in Rwenzori Mountains during this study included *Hyperolius cinnamomeoventris, Rana angolensis* and the endemic *Rana rwenzori*. During the study no amphibians were recorded above 3000m altitudes.

The biodiversity of Rwenzori Mountains is mainly based on limited number of species within

the genus, probably due to the adverse environmental conditions. However they are of great importance on account of the large number of species whose distributions are restricted to the small areas of highlands on either side of the western (Albertine) rift of which the Rwenzori Mountains are the largest. Based on the species lists now available for five indicator taxa, there are about 25 species of plant, 18 birds, 12 small mammals, 6 butterflies and one hawk moth which occur only in the Rwenzori; numerous others occur only in a few other forests and mountains along the Albertine rift (Howard 1995, Schmitt 1998). Moreover the entire Afroalpine ecosystem is unique, differing substantially from the small examples on the other drier East African mountains.

The stratified vegetation of Rwenzori is one of the main attractions for visitors. Five major vegetation zones can be observed. These are grassland (1000 - 2000m), montane forest (2000 - 3000m), Bamboo/Mimulopsis zone (2500 - 3500m), Heather/Rapanea zone (3000 - 4000m) and the afro-alpine moorland zone (4000 - 4500m). Though RMNP is not particularly rich in species numbers, it has a high number of endemics. The more conspicuous of these endemics include *Hypericum revolutum ssp. revolutum* (formerly *H. bequaertii*) with orange flowers; *Senecio adnivalis* and *Senecio erici-rosenii* two of the curious giant-groundsels; *Alchemilla argyrophylla* and related species which carpet much of the moorlands. Other species restricted to Uganda in the East Africa region are *Crotalaria adenocarpoides* and *Maesobotrya floribunda*. Other species only recorded on Rwenzori in Uganda are *Adenocarpus mannii*, *Galanthus diuresis*, *Canthium lactescens*, *Desmodium repandum*, *Jasminum abyssinicum*, *Rubus rosifolius* and *Schefflera polysciadia* (Howard 1995).

Rwenzori Mountains National Park is habitat to several endemic, endangered, threatened and rare species of the Albertine rift and also an Important Bird Area (IBA No. UG005). There are three recognised subspecies of mammals in RMNP. These are the Rwenzori Colobus monkey (*Colobus angolensis ruwenzorii*), Rwenzori Hyrax (*Dendrohyrax arboreus ruwenzorii*) and Rwenzori Leopard (*Panthera pardus ruwenzorii*). The Elephant (*Loxodonta africana*), Chimpanzee (*pan troglodytes*), L'Hoesti's Monkey (*Cercopithecus lhoesti*) as well as the Three Horned Chameleon (*Chamaeleo johnstoni*) are some of the other species of conservation concern (Byaruhanga et al, 2001).

There are 18 restricted range species (Albertine endemics), the second highest in Uganda to Bwindi Impenetrable National Park which has 24 restricted range species. There is an unconfirmed report of Grauer's Cuckoo Shrike but the park has not been well surveyed. In addition, RMNP has 60 of 86 afro tropical highland biome species again being only second to Bwindi Impenetrable National Park. They include some rare and spectacular birds like the Rwenzori Turaco (*Ruwenzorornis johnstoni*), Bamboo Warbler (*Bradypterus alfredi*), Golden-Winged Sunbird (*Nectarinia reichenowi*), Scarlet-Tufted Malachite Sunbird (*Nectarinia johnstoni*) and Stuhlmann's Double-Collared Sunbird (*Cinnyris stuhlmanni*). There is one Lake Victoria biome species, the White-Collared Olive-Back *Nesocharis ansorgei* and 17 species of the Guinea-Congo Forest Biome.

Criterion 7: Rwenzori Mountains support species of indigenous Clarias spp fishes including endemic *Varicorhinus rwenzori* and Barbus alluaudi and other river fish species.

Rwenzori Mountains support indigenous fish species. The most common Cyprinid species, which have been, described as *Varicorhinus rwenzorii*, *Barbus alluaudi*, *B*, *somereni*, *B*. *perince and B. Apleurogramma*. Other fish species include the fast flowing cat fish , Ampilius jacksonii, swamp catfish Clarias *alluaudi* various *Haplochromine* species. The distribution of fish varies with altitude.

**15. Biogeography** (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

## a) biogeographic region:

Albertine rift region

The system is predominantly situated in the Sudanian regional centre of endemism to the north of the lake. The vegetation is predominantly fire – climax secondary grassland and cultivation but the natural vegetation is a wooded savanna (State of environment report 2002).

## b) Biogeographic regionalisation scheme (include reference citation):

The biodiversity of the Albertine Rift, Wildlife Conservation Society, P.O. Box 7487, Kampala, Uganda

## 16. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

*Climate*: The climate of RMNP is tropical, affected by seasonal movements of the intertropical convergence zone and by altitude and topography (Howard P.C., 1991). There are two rainy seasons each year from March to May and from August to December (Osmaston and Pasteur, 1972). Most of the plains at the foot of the range lie in a rain shadow and get as little as 750mm of rain a year.

The diurnal temperature range is small, the mean maximum and minimum at Bujuku huts being at 7° C and <sup>-</sup>1° C and the seasonal variation is slight, the maximum being lower during the rains owing to the lack/limited sunshine (Osmaston and Pasteur, 1972).

#### Hydrology:

One of Rwenzori Mountains most important ecological and economic functions is the impact the range has on the area's hydrological cycle. The range's permanent streams and rivers contribute to the Nile by way of river Semliki which flows into L. Albert. Agricultural lands surrounding the park are fed partly by the mountain run off and partly from direct rainfall regulated by the Rwenzori forest clad slopes. The fisheries of Lakes George and Edward, hydropower and irrigation schemes and domestic water supply to over 500,000 surrounding people all benefit from the mountain's water catchment properties (WWF, 1998)

Soil types: The soils from the Precambrian rocks are generally of low fertility, except on the northern parts where there is some soils derived from volcanic ash originating from the

craters. The soils show a well marked altitudinal zonation caused by a combination of age, climate and erosional history. The lower grass slopes have soils usually moderately acidic and yellow or brown in colour (pH 5). These soils are of low or moderate fertility. On gentler slopes, the soils are more acidic (pH 4-5), leached and with low fertility owing to greater rainfall. In the areas of the L. Mahoma glaciations, the soils are shallow, young, black or grey, very humic and acidic (pH 4-5), infertile and have a little weathered underlying material (Osmaston and Pasteur, 1972; Harrop, 1960).

Higher up, the soils are mostly sandy or stony with good drainage. Peat bogs (pH 4) up to 6 ft deep are common at altitudes over 3,000m. Above 4,270m any bare soil is disturbed by frost but owing to the presence of thick moss and other vegetation.

Rwenzori is a range of mountains, which rise from about 1600m to 5109m above sea level. It is a rugged mountain range, which was uplifted by the tectonic movements responsible for the formation of the western rift valley. Almost all the range is composed of pre-Cambrian rocks more that 1800 million years old. The bulk of these are granites, gneisses and quartzites of the Basement Complex, while across the centre of the range lies the Rwenzori Group, a band of schists and resistant volcanic, of which the latter form the steep peaks of Mt.Stanley and the Portals.

Ten million years ago, during Miocene times, Uganda and the western Congo formed a continuous peneplain with sediments filling whatever rift there was. At this stage all major rivers flowed westwards draining into the Congo basin. When the faults occurred, the floor of the rift sank and the sides rose, reversing the drainage of many valleys and ponding up L.Victoria. The block making up Rwenzori was tilted and thrust up to a height of over 3,000m above the pen plain. The block was eroded and the rift partly filled with sediments, resulting in the present day relief.

## 17. Physical features of the catchment area:

Describe the surface area, general geology and geomorphologic features, general soil types, and climate (including climate type).

Catchment physical features are described above. Because of the big coverage of the mountains, catchments are big giving rise to big rivers that feed into Lake George and later into river Nile. The rwenzori catchment is one of the basins of river Nile covering an area of approximately 13,904 km<sup>2</sup>.

## 18. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

Rwenzori Mountains are one of the largest and most significant water catchment areas in Uganda. The rivers running down the mountain range feed the economically important lakes, Edward and George, and constitute a major source of the White Nile through the waters of river Semuliki that flows into L. Albert. Agriculture in the areas surrounding Rwenzori greatly benefits from the runoff from the range as well as direct rainfall, which is regulated by the mountains. There are irrigation schemes, hydro power stations and domestic water supplies, both locally and internationally, resulting out of this catchment.

## 19. Wetland Types

#### a) presence:

Circle or underline the applicable codes for the wetland types of the Ramsar "Classification System for Wetland Type" present in the Ramsar site. Descriptions of each wetland type code are provided in Annex I of the Explanatory Notes & Guidelines.

Marine/coastal: A · B · C · D · E · F · G · H · I · J · K · Zk(a)

Inland: L • 
$$M$$
 •  $N$  •  $Q$  •  $P$  •  $Q$  •  $R$  •  $Sp$  •  $Ss$  •  $Tp$  •  $T6$  •  $V$  •  $Va$  •  $V$  •

Human-made: 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9 • Zk(c)

#### b) Dominance:

List the wetland types identified in a) above in order of their dominance (by area) in the Ramsar site, starting with the wetland type with the largest area.

### M, U, Va, Vt, Tp, Ts, N, O, Xf:

**Note:** Accurate measurements of the areas of the various wetland types identified are not available.

#### 20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

The vegetation in the Rwenzori Mountains is largely determined by factors related to elevation and five distinct zones can be distinguished and these include;

## i. Grassland (1000 - 2000m)

Tall, dense Pennisetum purpureum (Elephant grass) grows in the valleys with shorter grasses and many flowering plants on the hill slopes where the thorny, red-flowered Erythrina abyssinica is often conspicuous. Flat crowned Albizia spp. are abundant in the small valley forests.

## ii. Montane forest (2000 - 3000m)

In the lower lying areas up to about 2,400m the montane forest vegetation is characterized by tree species such as *Symphonia globulifera*, *Prunus africana*, *Albizia spp.* and *Dombeya spp.* There are very few large trees exceeding 30m in height and the canopy is very broken except in valley bottoms and along ridge tops where gradients are comparatively gentle. Here the trees are very dense and layered with larger tree specimens.

### iii. Bamboo/mimulopsis zone (2500 - 3500m)

On moderate slopes with a deep soil, Arundinaria alpina forms a dense stand with few other plants among it, though nettles are sometimes painfully obvious. On steep and rocky slopes this is replaced by a thick tangle of Mimulopsis elliotii.

## iv. Heather/Rapanea zone (3000 - 4000m)

On poor soil (ridge-tops, rock, or moderately boggy ground) grow dense thickets of tree heathers, *Erica trimera* and *Erica kingaensis*. On well-drained slopes there is a greater variety of plants, with small trees standing over tangled undergrowth. Bogs in this zone are occupied by various kinds of sedge, chiefly Carex runssorroensis that forms huge tussocks up to 1m high between which grow Sphagnum and other mosses.

## v. Afro-alpine moorland zone (4000 - 4500m)

The most abundant vegetation in this zone is a tangled thicket about 5ft high of *Helichrysum stuhlmanni*, with white flowers that open quickly in any sunny period; at the higher altitudes the same species is only 1ft high, covered with white wooly hairs. Thickets of tree groundsels, *Senecio adnivalis* occupy gullies and other sheltered or well watered sites, and scattered individuals occur throughout the zone. Carex runssoroensis bogs are abundant in this zone too, and small brilliant yellow or orange moss bogs occur at the highest levels.

## Herpetiles

In a research study, Behangana observed that amphibians show high altitudinal stratification in terms of diversity and richness (Behangana, 1998). Some of the species recorded in Rwenzori Mountains during this study included Hyperolius cinnamomeoventris, Rana angolensis and the endemic Rana rwenzorica. During the study no amphibians were recorded above 3000m altitude.

#### 21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14, Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.* 

The bogy wetlands are well known to contain the tussock forming grass *Deschampsia* angusta. Noteworthy is the Tussock grassland, which is uncommon in the upper afro alpine zone.

## 22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.

Three endemic mammal subspecies are found in the Rwenzori Mountains namely: Rwenzori colobus monkey (*colobus angolenis ruwenzorii*), Rwenzori hyrax (*Dendrohyrax arboreus ruwenzorii*) and the Rwenzori leopard (*panthera pardus ruwenzorii*).

The Elephants (*Loxodonta Africana*) live in the forest up to 2440m, and occasionally wander up to 4180m on the Congo side. A few Buffalo (*Syncerus caffer*) occur in the lower valleys. Other animals, which, are sometimes also seen or heard, are Blue Monkeys and Bushbuck. The principal inhabitants of the bamboo/mimulopsis zone (2500 - 3500m) are the Red Forest Duiker, which also range to the upper limits of vegetation, and the Giant Forest Hog.

The Hyrax abounds from 3050 to 4100m and occurs in smaller numbers outside these limits. It lives among boulders and feeds on herbs, mainly alchemilla

There are many species in the lower zones but the density decreases with increasing altitude. The species include the *Ruwenzori turaco*, a brightly colored red, green and blue bird with a strident cackling cry. Francolins are often heard going noisily to roost in the evenings, and the olive pigeon is heard momentarily, whirring swiftly down the forest slopes. Other birds often

heard or seen are Archer's robin-chat, several species of Sunbirds, White-necked raven and Mountain buzzards. Shelley's crimson-wing, Lagden's bush-shrike and the Kivu Ground thrusts are in the near threatened category.

There are a few other birds of the Alpine zone, the only conspicuous ones being Black duck which are sometimes seen on the lakes, and the Alpine Swift which nest on rocky cliffs and twitter loudly at night, visiting the plains by day to feed.

Regarding reptiles, two interesting species of horned chameleon occur in the forest zone. No snakes have been found above 2440m and they are rarely seen on the lower slopes, the only Uganda records being *Thrasops jacksoni jacksoni*, a large black harmless snake, and *Atheris viridis*, a small green poisonous snake, which perches on bushes or elephant grass (Osmaston and Pasteur, 1972).

Jebson stocked several rivers with brown trout in 1932. These rivers included the Rwimi, Mubuku, Nyamwamba, Ruboni, Nsonge and Nyamugasani, and in 1938 some rainbow trout were put into the Nyamwamba and Sebwe. Some of these fish thrived and records have it that sizeable fish quantities were caught in 1942 – 1943 at Kakaka rest camp on the Rwimi a short way above the hot springs at about 1680m and that further fish were caught there in most years up to 1950. There is only one record of a catch after that, in 1955, and it is likely that the fish in that stretch of the river did not breed, though there were reputed to be many smaller fish in the tributary above some falls in the forest where fishing is very difficult (Osmaston and Pasteur, 1972)

### 23. Social and cultural values:

a) Describe if the site has any general social and/or cultural values e.g., fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values:

The history, culture and beliefs of the Bakonzo tribe are closely woven around the Rwenzori Mountains. These include the "kingdom", circumcision rites and rituals to remove curses (dry spells, disease outbreak etc). The Bakonzo deity Kitasamba with his four wives lives in the peaks. It is on the mountains that essential sacrifices are offered to the spirit by clan elders to secure the welfare of the land and the people. The mountain has not only served as a symbol of Konzo identity, but also as a source of Konzo national pride and a fortress in troubled times (Alnaes, 1998).

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning?

If Yes, tick the box  $\square$  and describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:

- sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

## 24. Land tenure/ownership:

## a) Within the Ramsar site:

The Rwenzori Mountains National Park is a stated owned protected area. According to the 1995 Constitution, the Government holds wetlands in Uganda in trust for the people. The government on behalf of the people therefore owns Rwenzori Mountains and its features.

## b) in the surrounding area:

In the surrounding areas land is privately owned by individuals and organizations. However, the proposed ramsar site is inside a national park, which is a protected area and therefore owned by government.

## 25. Current land (including water) use:

## a) Within the Ramsar site:

Rwenzori National Park within which the ramsar site is located has management plan with entry only allowed under permit for research and tourism activities (RMNP GMP, 2004).

### b) in the surroundings/catchment:

Most of the land surrounding Rwenzori Mountains National Park in which the proposed ramsar site is located is privately owned. It is mainly utilized for small-scale agriculture with coffee, bananas, beans, and maize being the main crops. Other crops are vanilla especially in Bundibugyo district, Irish potatoes (*Solanum tuberosum*), passion fruits (*Passiflora edulis*) and cassava (*Manihot esculenta*).

## 26. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

## a) Within the Ramsar site:

Currently the Rwenzori Mountain is under threat from growing tourism. However, the latter is limited to a narrow strip around the central peaks which some 1700 trekkers walked in 1993. The impacts of these "ecotourists" are relatively small and are being reduced by management.

## b) in the surrounding area:

The major threat is population pressure that has resulted into increased demand for agricultural land. This threat from human population around the park is a major concern to WWF/USAID regional conservation project and the success of this is critical to the long-term integrity of the range.

#### 27. Conservation measures taken:

a) List national and/or international category and legal status of protected areas, including boundary relationships with the Ramsar site:

In particular, if the site is partly or wholly a World Heritage Site and/or a UNESCO Biosphere Reserve, please give the names of the site under these designations.

In 1994, in further recognition of its value to the international community, Rwenzori Mountains National Park within which the proposed ramsar site is located was designated as a World Heritage Site.

**b)** If appropriate, list the IUCN (1994) protected areas category/ies which apply to the site (tick the box or boxes as appropriate):

c) Does an officially approved management plan exist; and is it being implemented?:

#### Yes:

Rwenzori mountains national park has a management plan, formally adopted in 2004. In terms of the 2004 management plan the national park is zoned for acceptable activities e.g. tourism, firewood collection, water etc. Permits to enter and conduct research and logistic activities in the various zones are issued by the Uganda Wildlife Authority (UWA). The UWA offers advice on all matters pertaining to the conservation management of the park, including being responsible for the revision of the management plan.

b) Describe any other current management practices:

WWF is currently supporting community based conservation projects like tree planting aimed at protecting Rwenzori National park.

## 28. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

The Wetland Management Department in partnership with UWA and WWF are in the process of reviewing the Rwenzori National Park Management Plan to take care of the Ramsar issues.

#### 29. Current scientific research and facilities:

e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

Institute of Tropical Forest Conservation of Mbarara University and Wild Life Conservation Society are currently carrying out an inventory on the biodiversity of the Albertine region within which the proposed Ramsar site lies.

## 30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

e.g. visitors' centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

UWA and WWF have been and are still promoting conservation efforts from district to local levels for the management and conservation of Rwenzori Mountains biodiversity.

#### 31. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

The major tourism activity in RMNP in which the Ramsar site is located is mountaineering. Climbing any of the peaks of Rwenzori Mountains takes an extra day or more depending on how far it is from the central circuit and the kind of terrain to be traversed. Margherita is the major peak preferred for climbing by most visitors.

#### 32. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept of Agriculture/Dept. of Environment, etc.

For purposes of administering justice and general application of Ugandan law, the proposed Ramsar site is part of Rwenzori mountains National park which falls under the mandate of Uganda Wildlife Authority.

Functional jurisdiction is held by Uganda Wildlife Authority, Wetland Management Department (WMD), National Environment Management Authority (NEMA); District Environment and Fisheries Offices for Kasese, Bundibugyo and Kabarole districts, Department of Environmental Services, Department of Forestry Services.

#### 33. Management authority:

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Uganda Wildlife Authority Plot 7 Kiira Road, Kamwokya P. O Box 3530, Kampala - Uganda.

Tel: 256 41 355000 Fax no: 256 41 346291 E-mail: <u>uwa@uwa.or.ug</u> Website: <u>www.uwa.co.ug</u>

#### 34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

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