

RWENZORI MOUNTAINS NATIONAL PARK, UGANDA (N684)



A Uganda Wildlife Authority report of January 2015

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PERIODIC REPORT ON WORLD HERITAGE PROPERTY SUBMITTED FOR REVIEW AND ONWARD TRANSMISSION TO WORLD HERITAGE CENTRE, UNESCO JANUARY 2015

A. INTRODUCTION

Rwenzori mountains National Park Identification Number 684, state Party Uganda, type of property Natural and year of inscription on the world heritage list 1994.

Location of the park

Rwenzori Mountains National Park (RMNP), a World Heritage Site, lies in Western Uganda. It borders the Democratic Republic of Congo (DRC) in the West. It is located in the four districts of Kasese, Kabarole, Ntoroko and Bundibugyo.

The mountains lie between altitudes 0° 06' South and 0° 46' North and longitudes 29° 47' West and 30° 11' East. The mountain ranges out of which the park has been gazetted are much larger in size running about 80 Kilometres in the North - South direction and 40 Kilometres in the East - West direction. The park is part of the ranges, which rises from about 1670m to 5,109m above sea level (asl), which includes Africa's third highest peak, Margherita at 5109m asl.

Area of the park

The park covers an area of 995km². RMNP is a constituent protected area in Queen Elizabeth Conservation Area landscape. It was inscribed a WHS in 1994 and RAMSAR site in 2009.

Purpose of gazettelement

RMNP (a World Heritage Site) was gazetted in 1991 for the protection of *the water catchments, unique natural and scenic beauty and its fragile mountain ecosystem which supports threatened, endemic, and rare species of fauna and flora for the benefit of the local and international community now and in the future.*

B. CONSERVATION VALUES

Water catchment

The Rwenzori Mountains are one of the largest single and most significant water catchment areas in Uganda, and the African region at large. As a catchment area, over 5 million people in the Rwenzori region depend on this mountain source for household water usage. It contributes significant waters to the fisheries industry and the river Nile.

Scenic beauty

On the ranges are a combination of beautiful peaks, glaciers, Valleys, Rivers, Lakes and various species of flora and fauna making the Rwenzoris one of the most scenic places on the African continent. The stratified vegetation is one of the main attractions for visitors.

Unique biodiversity

The vegetation of Rwenzori is altitudinally stratified with grassland, 1000m – 2000m; montane forest, 2,000 – 3,000 m; bamboo/mimulopsis zone, 2500 – 3,000 m; heather/rapanea zone 3,000 – 4,000 m; Afro – Alpine zone 4,000 – 5,000 m. The most striking plants are found above 3000m. These are the giant tree heathers supporting aerial epiphytic gardens of outstanding botanical and aesthetic interest, some of which are unique to the Rwenzoris. The Afro alpine zone is home to the most graceful giant lobelia (*lobelia wallastoni*) and groundsels (*Senecio admiralis*). These gigantic species are hallmarks of the Rwenzori.

The mountains are habitat to several endemic, endangered, threatened and rare species of the Albertine Rift and also an Important Bird Area (IBA)

The Rwenzoris are renowned for species of conservation concern. The park has 54 Albertine Rift endemics which include 18 species of mammals, 21 species of birds, 9 species of reptiles and 6 species of amphibians. Five species are endangered, 14 are threatened and 4 have restricted range. The endangered species include the Rwenzori duiker (*Cephalophus rubidus*), montane squirrel (*Heliosciurus ruwenzorii*), chimpanzee (*Pan troglodytes*), African elephant (*Loxodonta africana*) and Rwenzori range frog (*Africana ruwenzorii*). Four species have restricted range. These are Rwenzori/Kivu climbing mouse (*Dendromus kivu*), the Rwenzori Duiker (*Cephalophus rubidus*), *Bradypodion xenorhium* and the Uganda clawed frog (*Xenopus ruwenzori*).

The Rwenzori supports one of the most important bird communities in Uganda, with a total of 217 species having been recorded. Whilst this represents only a moderate level of species richness, the forest harbours many rare, threatened and endemic species. The amphibians show high altitudinal stratification in terms of diversity and richness. Two species of horned chameleons occur in the forest zone. Two species of snakes have been recorded below altitude of 2440 M.

C. MANAGEMENT PLAN

The review of the General management plan for the Site that was due to expired by 2014, was commenced during the year and by end of 2014, the initiation meetings, consultation at village, parish sub-county, and district level had been accomplished. Internal funding by the organization and some support from WWF enable the accomplishment of the initial stages of the plan review. UWA has set adequate resources for the successful review of the GMP for the site which is expected to be completed by June 2015.

Resources for communities

Rwenzori mountains National park, a World Heritage Site, is an important source of resources for communities, the Bakonzo and Bamba, who live on the slopes of the mountain. The resources include smilax and acalph (for basket making), medicinal plants, mushrooms, water, honey, fibres from tree bark, bamboo stems, sheath and coloured clay. During the reporting period January – December 2014, three multiple resource access memorandums of understanding were reviewed and signed to enhance sustainable resource access with the local communities along the Park front line Parishes of Bungaha, Busamba and Kamabale, while four MoUs for Kakuka, Mabere, Kikyo and Kibwa parishes are under review before expiry date of March 1, 2015.

Cultural values

The history, culture and beliefs of the Bakonzo and Bamba are closely woven around the Rwenzori Mountains. These include the Kingdom rituals, management of sacred sites, to mention but a few. The Bakonjo deity Kitasamba with his four wives is believed to have lived in the peaks. During the reporting period, the two tribes (Bakonjo and Bamba) split to form two kingdoms with the Bamba kingdom on the northern lowlands of the mountains and the Bakonjo kingdom remaining on the slopes and the rest of Kasese district and parts of the Democratic Republic of Congo occupied by the Konjo language.

The increasing integration of cultural approaches in the conservation of the primates and its habitats continued to be acceptable by communities surrounding the Heritage site and is reducing threats to the chimps.

To minimize crop raiding especially by primates (chimps, baboons, monkeys), management initiated a pilot program of promoting alternative high value crop, onion and garlic growing in the frontline parishes starting with Katebwa-Kinyampanika parishes. The crops are non-palatable to the primate community and mature within three months. The two crops are valued as high income generating to the local farmers. This program is being embraced by the community and is being funded by Flora and fauna Uganda Chapter. Once this is seen as successful, it will be rolled out to all areas impacted by crop raiding.

Glaciers and multiple high altitude wetlands

The Equatorial mountain glaciers continue to thrive amidst climate change effects. The snow continues to be key attraction for Tourists visiting the region. The numerous rivers that flow from the mountain continue to feed the low lying plains with high rainfall and gradual melting of snows. Many bogs with associated plant and animal life occur in the mountains. Since last year when the previous report was submitted, there has been no significant change in the status of the glaciers and in the amount of the water in the bogs, lakes and rivers, the water has not reduced, neither has it increased even after the repeated floods in May 2014 that affected the river Nyamwamba areas.

State party engaging local communities in the conservation of the property

The Park Authority continued to engage, promote and involve the local community in conservation and Tourism activities (*Rwenzori mountaineering services, Ruboni community and Turaco Tourism community group among others*) around the site. The communities continued to manage the entire Park boundary through the community boundary management committees and multiple

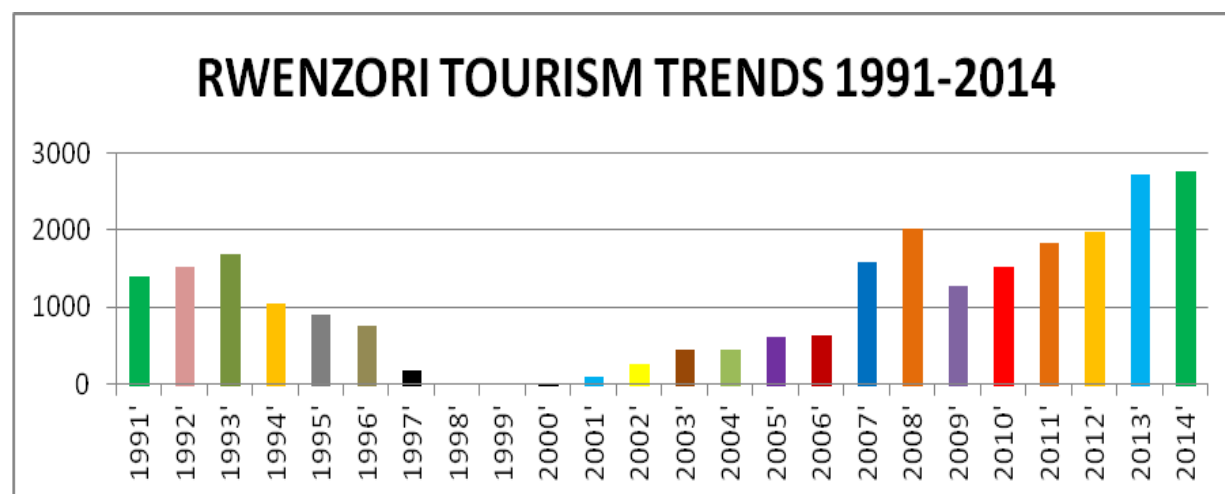
Resources use agreements (CRUA-Collaborative Resource Use Agreement). This way, the boundary has been clear to the surrounding communities to deter encroachments and strengthening Park integrity. The communities have also been engaged in the conservation of the chimp through community campaign activities. Communities have also been engaged in beekeeping to enhance income generation for livelihood improvement. Beekeeping is continuing to do better in Katebwa, Kinyambanika and Kilembe.

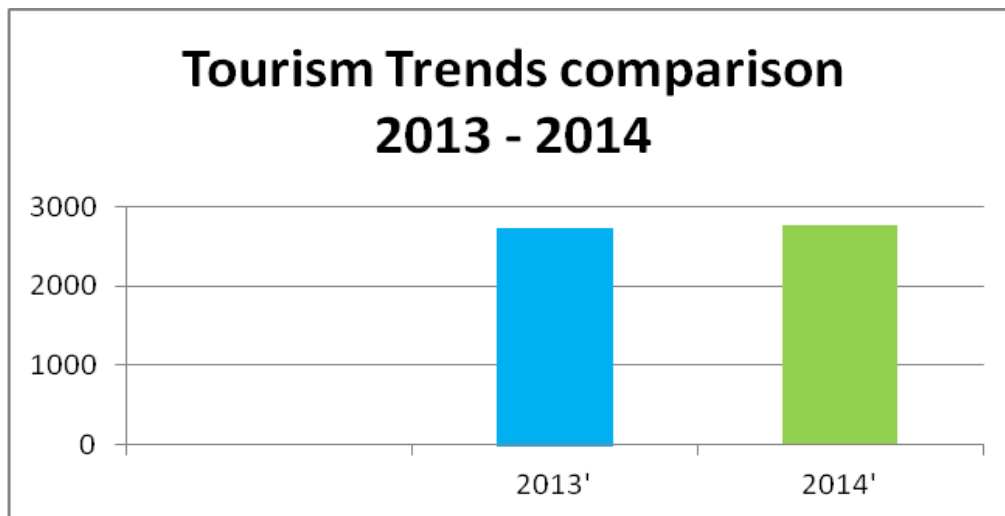
Tourism activities

During the reporting period, the Site received a cumulative total of 2,762 tourists, the number is still lower than those of other similar sites in region such as Mt. Kilimanjaro. The tribal conflicts and Ebola outbreak in West Africa could have affected the tourist arrivals during the year.

TOURISM STATISTICS FOR RMNP 1991 - 2014

Year	No. Tourists	Year	No. Tourists
1991'	1402	2003'	455
1992'	1531	2004'	449
1993'	1683	2005'	616
1994'	1043	2006'	628
1995'	899	2007'	1583
1996'	754	2008'	2021
1997'	171	2009'	1282
1998'	0	2010'	1524
1999'	0	2011'	1824
2000'	8	2012'	1973
2001'	104	2013'	2724
2002'	271	2014'	2767

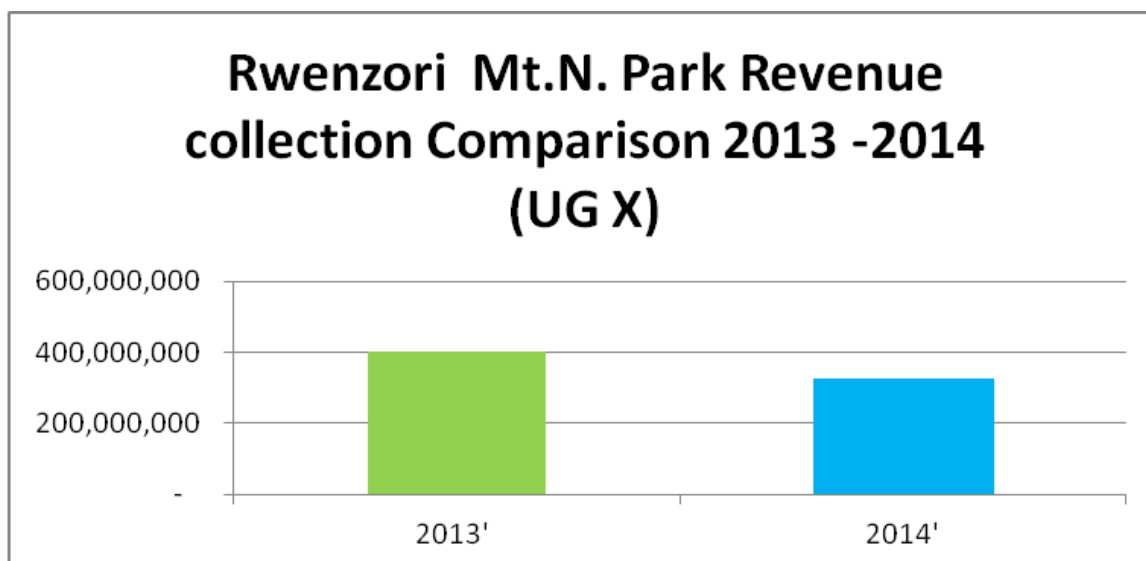




REVENUE COLLECTION COMPARISON FOR THE YEAR 2013- 2014 (UG X)

Year	Jan- march	April Jun	Jul Sept	Oct Dec	Revenue Collected
2013	142,759,320	39,027,000	120,224,050	101,729,190	403,739,560
2014	106,860,795	42,019,060	103,484,000	72,228,910	324,592,765

Analysis of the two graphs (above and below) indicates that the site received more paying Tourist and generated more revenue in the year 2013 as compared to the year 2014. This is due to the high number of national students (1,558) received following the repeated flash floods as compared to (893) students that visited the Park in 2013. The flood activity was a learning experience that brought more students on site for educational trips. It should also be noted that 2014 was characterized by Ebola outbreaks in West Africa and terrorism activities in Kenya that affected Uganda's visitation levels. We anticipate that this situation will get back to normal once the mentioned threats are got rid of.



Revenue sharing

The revenue sharing guidelines were reviewed and approved by the Board of Trustees to enhance equitable benefit for the communities in the front line parishes who are affected by the costs related to site existence. In the current guidelines, disbursement of benefit will depend on the area population and length of the park boundary within a particular community parish.

Sustainable financing strategy and business plan for the property

Rwenzori started the implementation of the sustainable financing business program with the initial support from WWF –Sustainable financing program, commissioned in the first quarter of the year. The program focuses on Tourism promotion

The project worth 1.3million Euros started with funding from European Union with Co-funding from the French Development Agency. The areas that are being addressed for enhancing sustainable financing in Rwenzori include:-

- Supporting the Park and communities surrounding it in developing and promoting Eco and community -Tourism activities. **Initial stages**
- Diversifying Tourism activities. **Initial stages**
- Marketing of the Rwenzori Tourism activities to increase visitor numbers. **Initial stages**
- Community activities to minimise resource use especially fuel wood.- Energy saving stoves(Gold standard) will be implement. *Progressing well*
- Payment for watershed management (ecosystem services) shall be initiated. **Initial stages**
- Explore possibility of REDD. **Initial stages**
- Supporting the development of Rwenzori Mountains Business Plan. *(WWF Supported the consultations process for review of General management plan at district, sub-county and Parish level as initial stage for developing the business plan)*

All these activities and others are aimed at enhancing sustainable financing of Rwenzori mountains National Park.

Transboundary collaboration between DRC and Uganda

The trans-boundary initiatives are still on especially field meetings and coordinated patrols. Quarterly meetings are being held between Uganda and DR Congo to plan operations. The insecurity caused by insurgents across in DRC is a limiting factor to the extensive coverage of extended patrols by the DRC Rangers.

D. MONITORING ACTIVITIES

Monitoring impact of climate change

On climate change, management of the site continues to carry out activities that are aimed at monitoring climate change impacts. These include:-

- Weather monitoring (Data collection on weather parameters is continuing).**

Weather data is continuously collected on quarterly basis from Automatic weather stations installed at different altitudes to monitor impacts of climate change in the park. This provides information on different parameters like temperature, relative humidity, rainfall, wind speed to

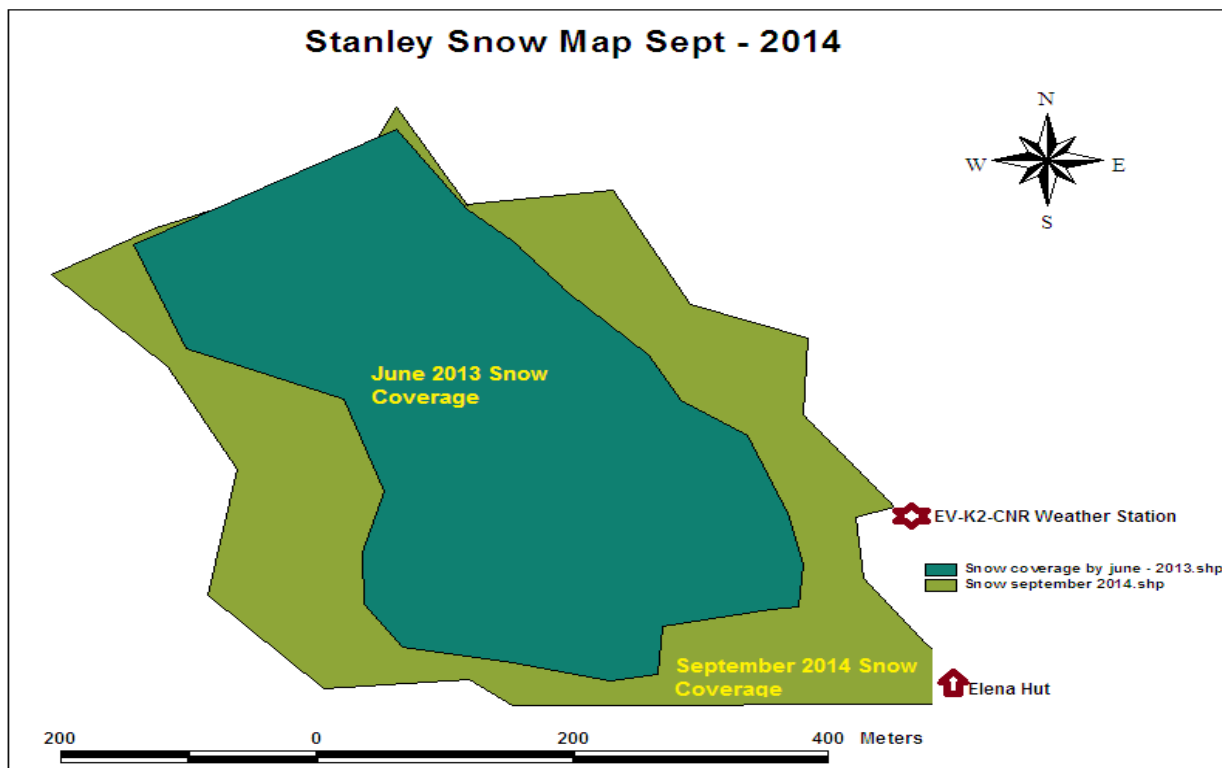
mention but a few. This establishment is providing useful data on possible causes of snow recession and related melting of glaciers. There is a central database where all weather data are safely stored for future use. EV-K2-CNR trained staff in basic data analysis and monitoring staff are able to produce analyzed reports.

b) Snow recession

Monitoring of Snow recession continued from the three permanent sample plots on mount Stanley, Speke and Margarita; the findings indicates annual fluctuation in the snow coverage

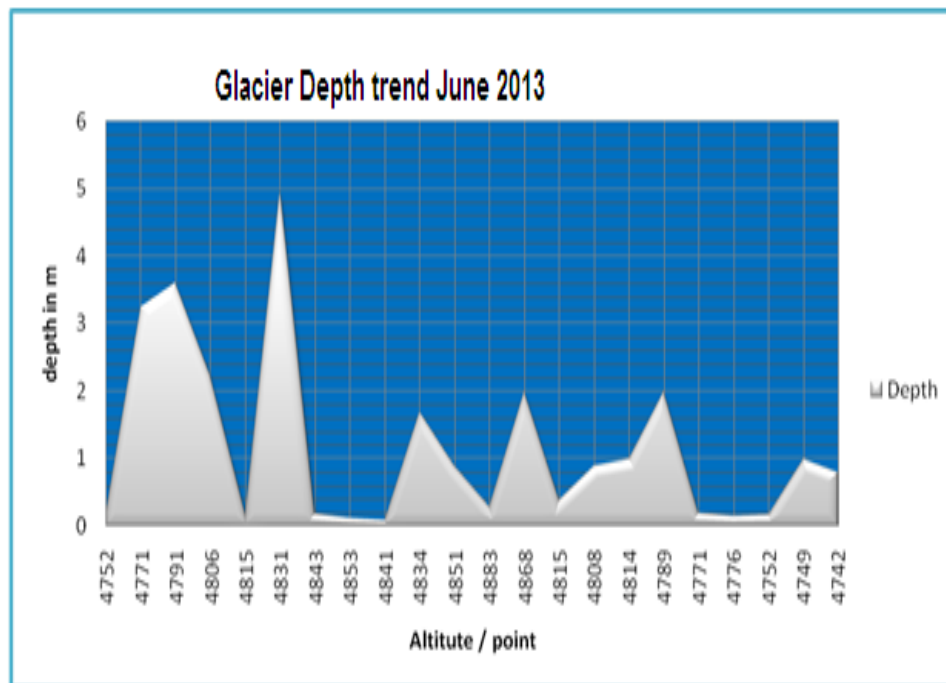
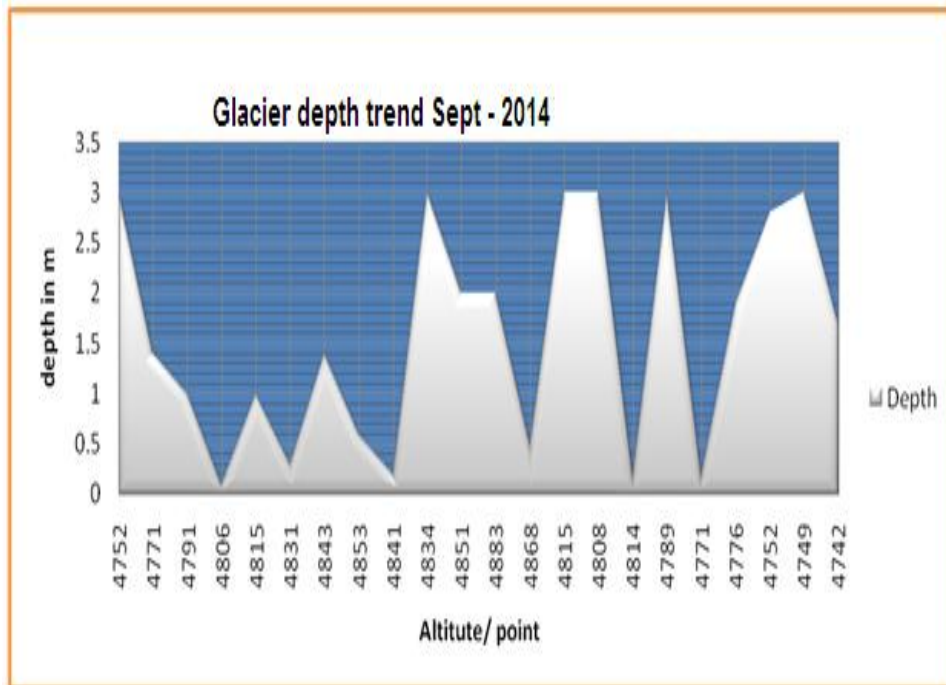
The area covered by snow was mapped using GPS and compared with the old GPS mapping done in June 2013. It showed an increment of about 20% in area coverage.

Snow map September - 2014



We monitor glacier depth from the same measuring point establish in June 2013 and comparisons made as shown in the trend below. There was increment of Glacier during the year 2014 as compared to June 2013 as shown in the trends below. The measurement points are geo-referenced for systematic reference.

Glacier Mesuerment for September 2014 compared to June 2013



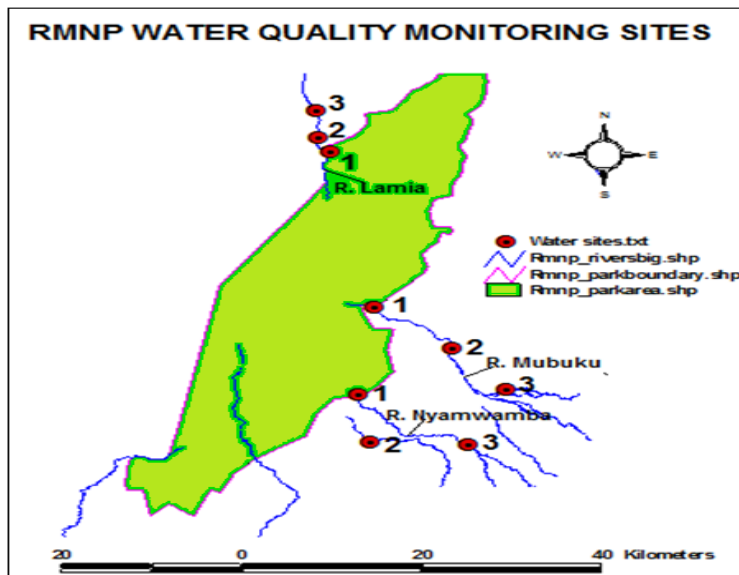
Earth, Atmospheric and planetary science research trained one RMNP staff to monitor weather related activities including the installation and downloading of weather GPS data. The pictures below were taken on Mt Baker during the installation of weather monitoring equipments.

Plate below shows staff and Researcher installing weather GPS on Mt. Baker



c) **Water monitoring (Bio-monitoring of water quality is on-going)**

RMNP's noble conservation value is its role as a water catchment site. Over twenty glacier lakes exist in the alpine zone, and over 50 rivers originate from the mountain to feed important life supporting activities (agriculture irrigation, domestic use, mini hydro power generation extra) in the plains occupied by millions of people, industries and national parks (Semliki's, Kibale, Queen and Par de Virunga in DRC).



It contributes to the river Nile through the Semliki River. Because of this the water quality that comes out of the Rwenzori is monitored using bio-monitoring approach:-

Bio-monitoring activities are conducted on the four main rivers Mubuku, Nyamwamba, Rwimi and Lamya, the programme is providing better understanding of changes in water quality within the rivers being monitored. The rivers being monitored are fed by melt snow water which also provides a broader understanding of

impacts of climate change in and around RMNP. UWA continued to carry out routine Water quality monitoring on quarterly basis on rivers of Nyamwamba, Mubuku, and Lamia as the major rivers. Staff monitored water conductivity, water velocity, Water temperature and amount of dissolved oxygen in the water in addition to the bio-monitoring.

Conductivity: Each stream tends to have a relatively constant range of conductivity that, once established, can be used as a baseline for comparison with regular conductivity measurements. Significant changes in conductivity could then be an indicator that a discharge or some other source of pollution has affected the stream water quality.

Temperature: this is monitored because it affects many physical, biological, and chemical characteristics the river. Temperature affects the amount of oxygen dissolved in the water. The

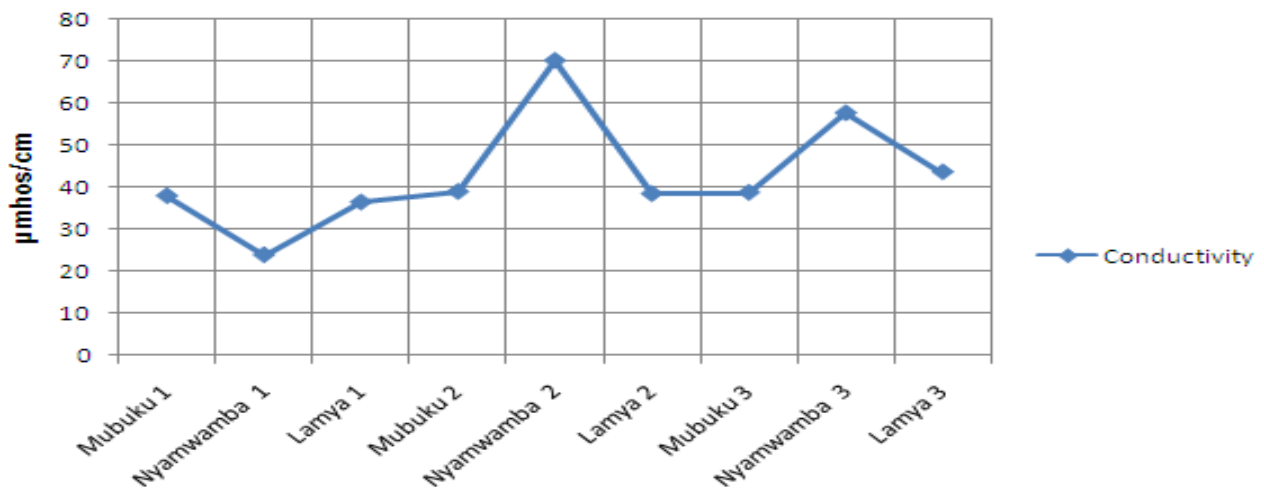
amount of oxygen that can be dissolved in water affects the rate of photosynthesis of plants, metabolic rates of animals, and the sensitivity of organisms to toxic wastes, parasites, and diseases.

Dissolved oxygen: is a measure of the biological activity of the water masses. Phytoplankton and microalgae present in the water mass-produce oxygen by way of photosynthesis. Bacteria and eukaryotic organisms consume this oxygen through cellular respiration. The results of these two mechanisms determine the concentration of dissolved oxygen, which in turn indicates the production of biomass.

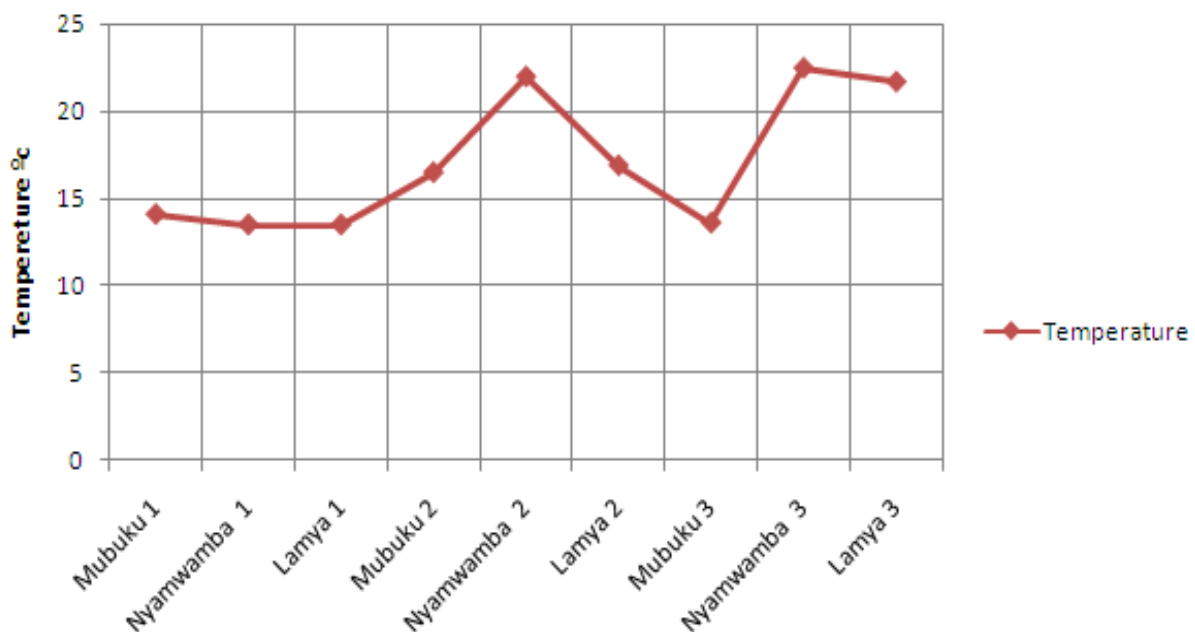
The analyses done are summarized below:

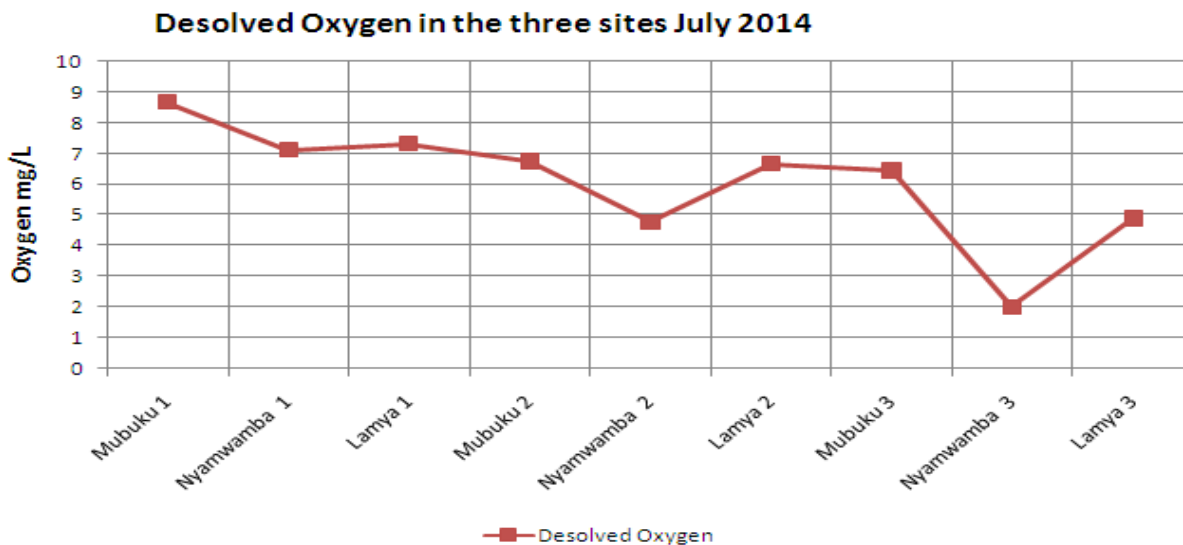
Trends for Water conductivity, Temperature and velocity

Conductivity at three rivers in nine sites July / 2014



Water Temperature trend / site July 2014





Relative abundance and distribution of Trout Fish:

Trout Fish monitoring was done in Kicucu and Kart Shefa Bridge along River Mubuku to establish the abundance of fish and their distribution. Monitoring forms for data recording were introduced to meet the required information. Local fishing baskets were used to trap fish and easily released after the study. The results indicate that the trout fish is continuing to flourish inside the park and gaining altitude. So far, latest data indicates that the fish inhabits the waters up to 2400m asl at Kicucu.



Impact of climate changes in vegetation belts Vegetation PSP

During the reporting period, the ten permanent simple plots were maintain by re-opening the directional and side trenches and no measurements during the year. The midterm measurements are scheduled after five years for meaningful vegetation changes if any.

Impacts of climate change on species of restricted range (wild game).

Staffs continue monitoring of mammal distribution within the site using Ranger based data collection approaches and detailed analysis done for the period 2007 to 2014. The result indicates that most of the animals are found in the forest zone more especially the primates- Chimps, monkeys, elephants extra while Duikers and Rock hyrax can be found even up to the alpine zone. Elephant distribution was also seen to be limited to the forest zone and localized to the central

zone of the Park, between Lake Mahoma, Nyabitaba and River Mubuku down to the Park boundary in Mihunga. The map below shows the distribution of wildlife within RMNP as sighted by rangers while on patrol.

Fire impacts and Vegetation regeneration Monitoring:

A team of staff conducted an inspection hike for monitoring of regeneration process in the fire /burnt areas in the year 2012 of the alpine areas (Heather zone 3,500m asl) causing damage to the fragile giant high altitude species of lobelia, heather etc. Field observations show a rapid regeneration process in the areas of Bigata, Bamwanzara pass, Mutinda and Kalhalhama areas. The areas that were affected by fire in Kilembe and other areas Bigata, Bamwanzara pass, Mutinda and Kalhalhama are recovering steadily with several sighting of wild game especially the red duikers.



The photos above are representations of staff monitoring activities within the fire affected areas along Kilembe tourism trail at 3300m asl and 3500m asl.

A fire plan was generated and is being operationalized, involving local participation in its implementation. Awareness raising, pre-suppression and suppression measures are among the key approaches used by stakeholders and local communities especially those operating near (farmers on the Park boundary) and inside the Property (Tourism Porters and guides). There were no significant fire outbreaks in 2014.

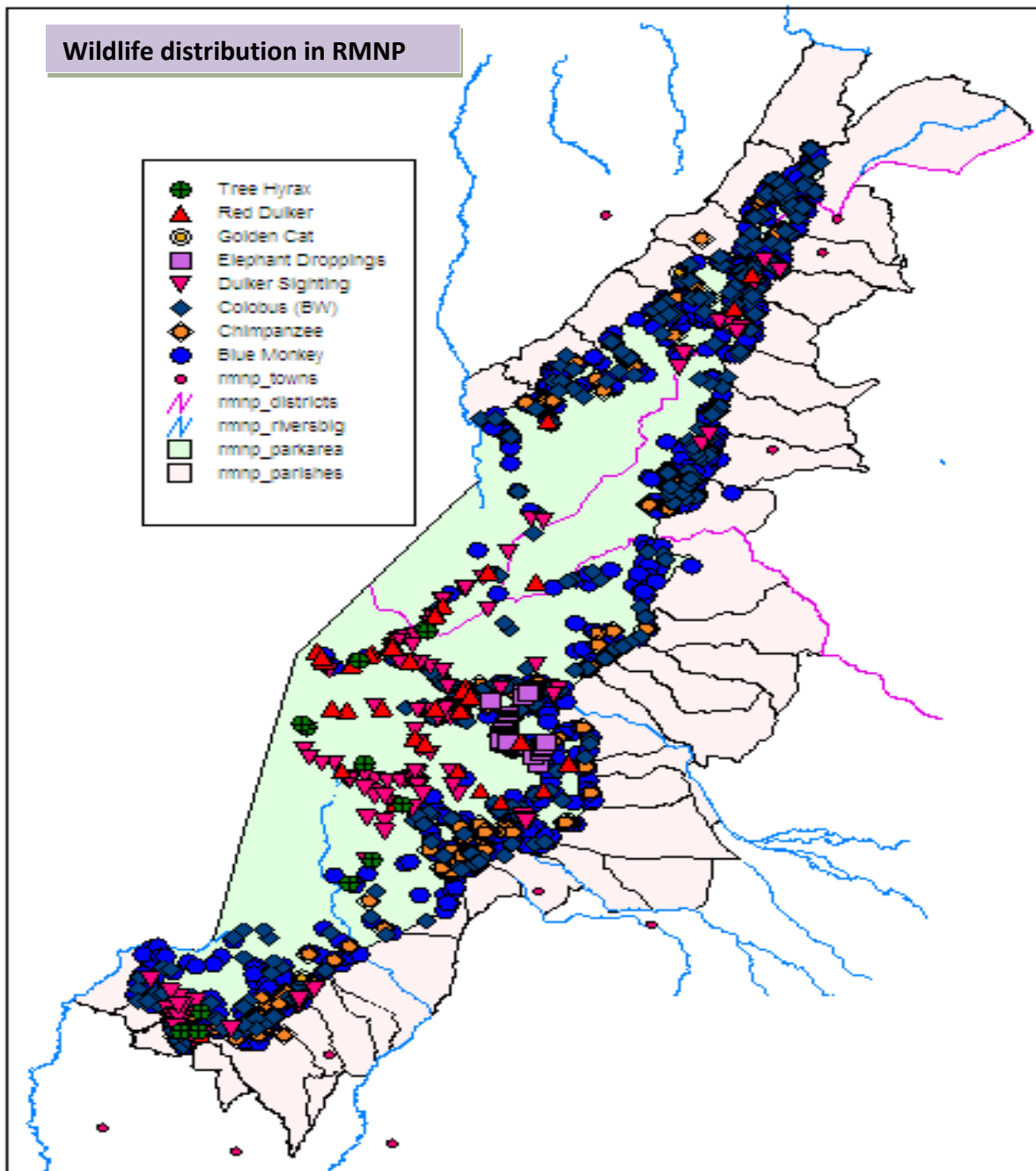
The frontline mobilized community (boundary management committees and Resources use committee) and cultural Institution have been instrumental in fire campaigns to dissuade local communities in use of fire near the Heritage site.

This has been effective during the period under review, negligible boundary fires were reported and voluntarily extinguished by the frontline communities, prior to causing damage to the Property.

This self community conservation policing are being emphasized by staff in all awareness meetings. Management still rely on the basic traditional fire tools like machetes, hoes, rakes, fire beaters and jerry cans for carrying water.

Mining activities

Although the intention to re-open the Kaolin quarry in Kasitoha area by Kilembe mines Limited was halted July 2006 and since then, no attempts have been made towards mining and no mining is taking place in the entire Protected area, during the reporting period, Uganda government signed a 25year concession deal with Chinese Tibet Hima Limited to extract approximately/over



4.5 million tonnes of confirmed copper deposit still underground within Kilembe geographical area. The concession area is adjacent to the Rwenzori mountains National Park and revamping its activities directly affects the water streams flowing to Queen Elizabeth National Park (South East of RMNP).

Ecological monitoring plan

Detailed ecological monitoring plan was developed for Rwenzori through a consultative and Participatory approach with UWA staff and key stakeholders. The monitoring program is currently focusing on the key issues identified in the plan (Click folders below for details):



Collaborative resource use agreements:

One new resource harvesting group was signed for Bunguha Parish in Bundibugyo district and two were reviewed for Kamabale –Kabarole and Busamba in Bundibugyo district. The collaborative resource use agreements are aimed at strengthening the Park community relationship and effective regulation of resource access by the stakeholders.

E. INFRASTRUCTURE AND DEVELOPMENT ISSUES ON SITE

A two roomed Office was constructed with a gate structure (see photo below) at Mihunga central tourist circuit park entry to enhance record management and visitor entry into the Park.



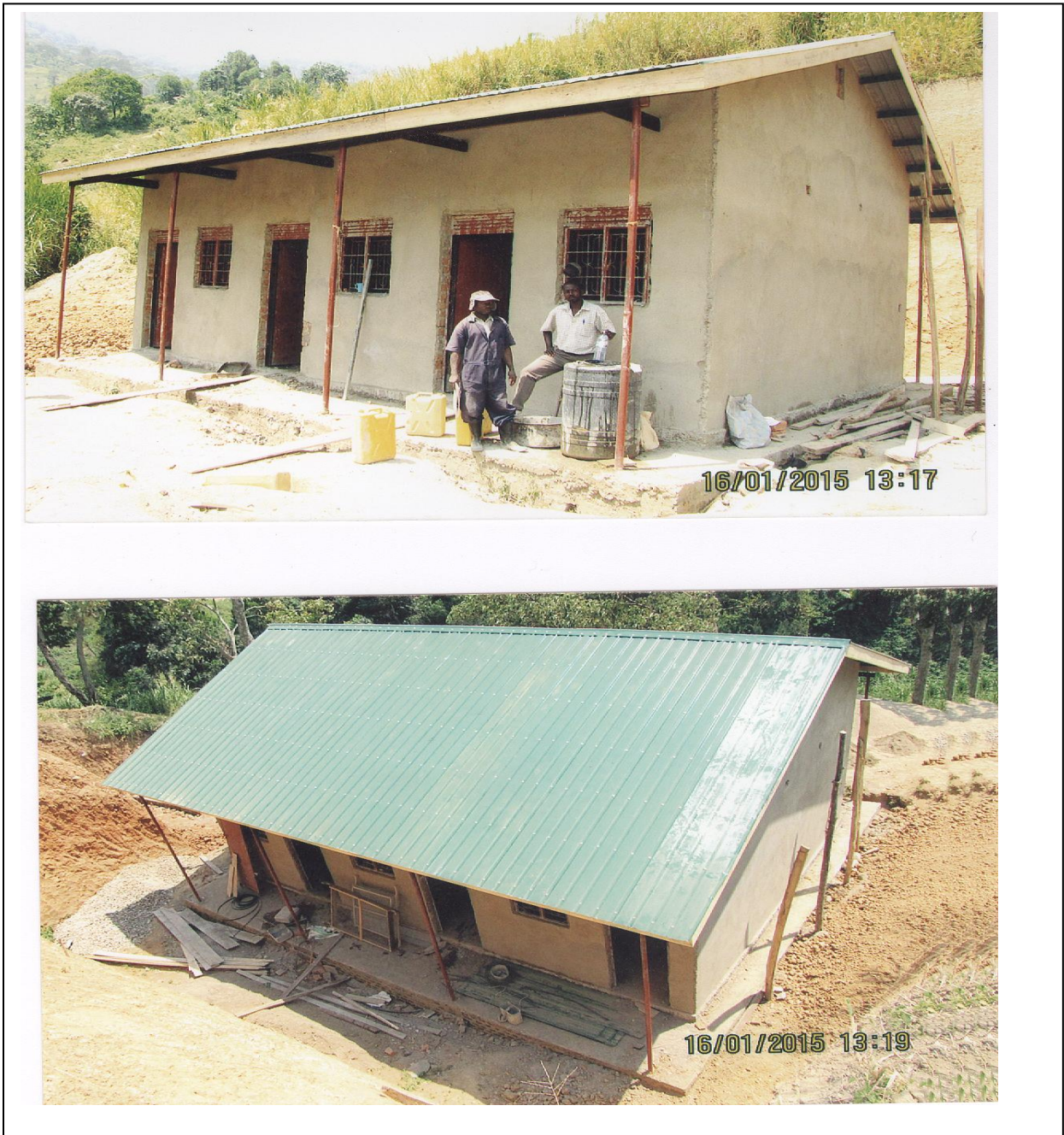
A six roomed Ranger accommodation is under construction at Kazingo (Kabarole District) (Coordinates: 36N 0184269, UTM 0072340 – photo below) about 3km from the Park boundary increasing staff accommodation facilities close to the Park.

Access Bridges

During the period under review, the property experienced a flash flood in May 2014 that destroyed infrastructure inside and outside the property. Among those destroyed included the access foot bridges (Kanywankoko bridge along the central tourist circuit) and public roads (access road to the park) thus hindering access to the Property. Routine and repeated repairs were fully done to reinstate the bridges to ease access by tourists and staff to the property (photos below).

Development of Kakaka Mini Hydro Power Project along river Rwimi

Development of the mini hydro-power weir by Greenwus Energy Africa Ltd (www.greenwus.com) inside the property on river Rwimi at Kakaka has not been approved. Consultations with stakeholders (including the WHC) are ongoing. No developments will be allowed if the stakeholders are not in favour of the project.



Kazingo ranger post under construction



Access bridges on Kanywankoko and Bujuku rivers respectively after repair

F. THREATS TO RMNP AND MITIGATIONS

- Climate change effects - Flash Floods that destroyed tourism infrastructure, regular maintenance of bridges and board walks along the central circuit trail effectively done to minimize the impact of floods on the tourism infrastructure. We also anticipate some vegetation changes with time which are likely to affect the vertical and horizontal distribution of wildlife. Site management will utilize the Ecological monitoring plan which has recently been formulated to keep close watch of the negative impacts despite the limited resources to implement the plan
- Potential Insecurity along the International border within DRC. This sometimes affects the visitations to the site. The State has provided adequate counter forces outside the site to safeguard the property tourism activities. Some tourism police personnel are deployed at the entry points of tourists to ensure their safety.
- Financial sustainability – Low tourism visitations are the reason why the site generates very little
- Inter tribal conflicts within the Site’s environment- threatens the site’s tourism potential. The State Authority and cultural institutions addressed the matter and the local communities are now living in peace and harmony.
- Wildfires - Tested and community supported Fire management plans in place
- Prospectus for resumption of mining of minerals by Kilembe mines-Hima Tibet in the proximity to the site. Management is closely monitoring these activities which have not been done within the site.
- Increasing interests by investors in developing mini-hydropower around Rwenzori mountains region is a potential threat to the status of the Site. Management is engaging the investors accordingly e.g. Kakaka)
- Increasing human population along the sites boundary increases pressure on the site’s resources for household basic needs especially fuel wood. Site management has engaged the community through negotiating multiple resources access agreements that regulate resource access. Woodlots are also being encouraged and some of the community members have started on this.
- Inadequate capacity to expeditiously manage Rescue of clients from the Mountain – Need for equipment and refresher basic training on rescue. Scheduled annual refresher trainings in rescue are being done once a year.
- Undocumented cultural norms amidst increasing integration of diverse global community - management is working with the local cultural Institution to promote cultural in conservation and document indigenous knowledge and cultural norms.
- Inadequate staffing levels - UWA implementing recruitment of new staff annually, one such recruitment was completed two years ago and another is slated for July this year. However, the issues of sustainability and self financing still pose big challenges to bringing more staff on board
- Inappropriate mountaineering gears /equipments/tools to patrol all sections of the rough terrain (Basics old in-use mountain gears available/replacement plan not in place

Conserving for Generations