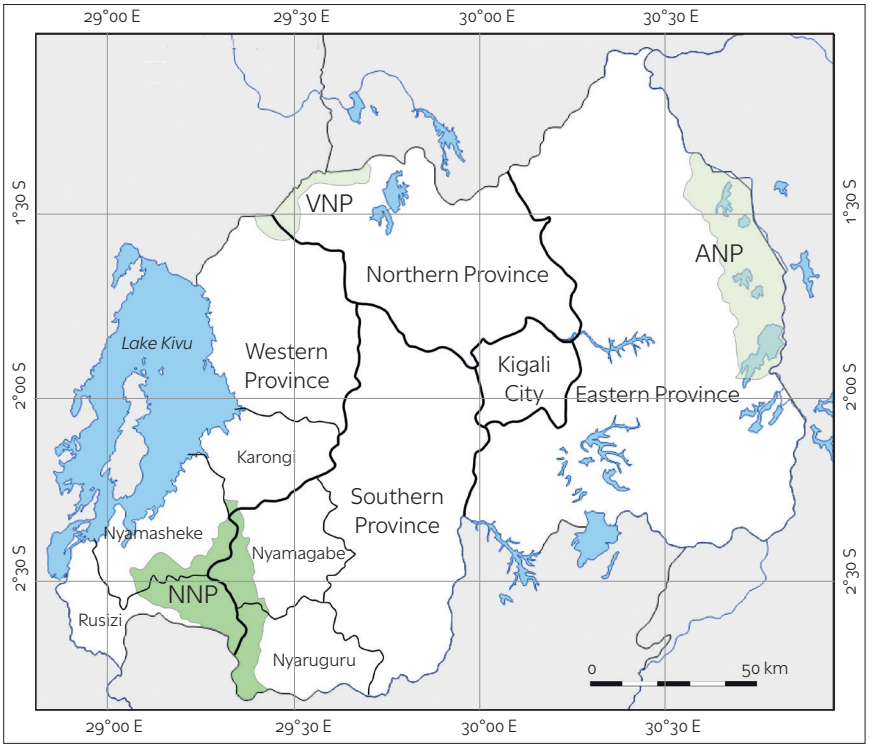
Executive Summary

State Party

Republic of Rwanda

State, Province

- **Western Province**: Districts Karongi, Nyamasheke, and Rusizi.
- **Southern Province**: Districts Nyamagabe and Nyaruguru (Figure 1).



1. Location of Nyungwe National Park (NNP) in Rwanda, with the four provinces and Kigali City, the five districts covered by NNP, and Volcanoes National Park (VNP) and Akagera National Park (ANP).

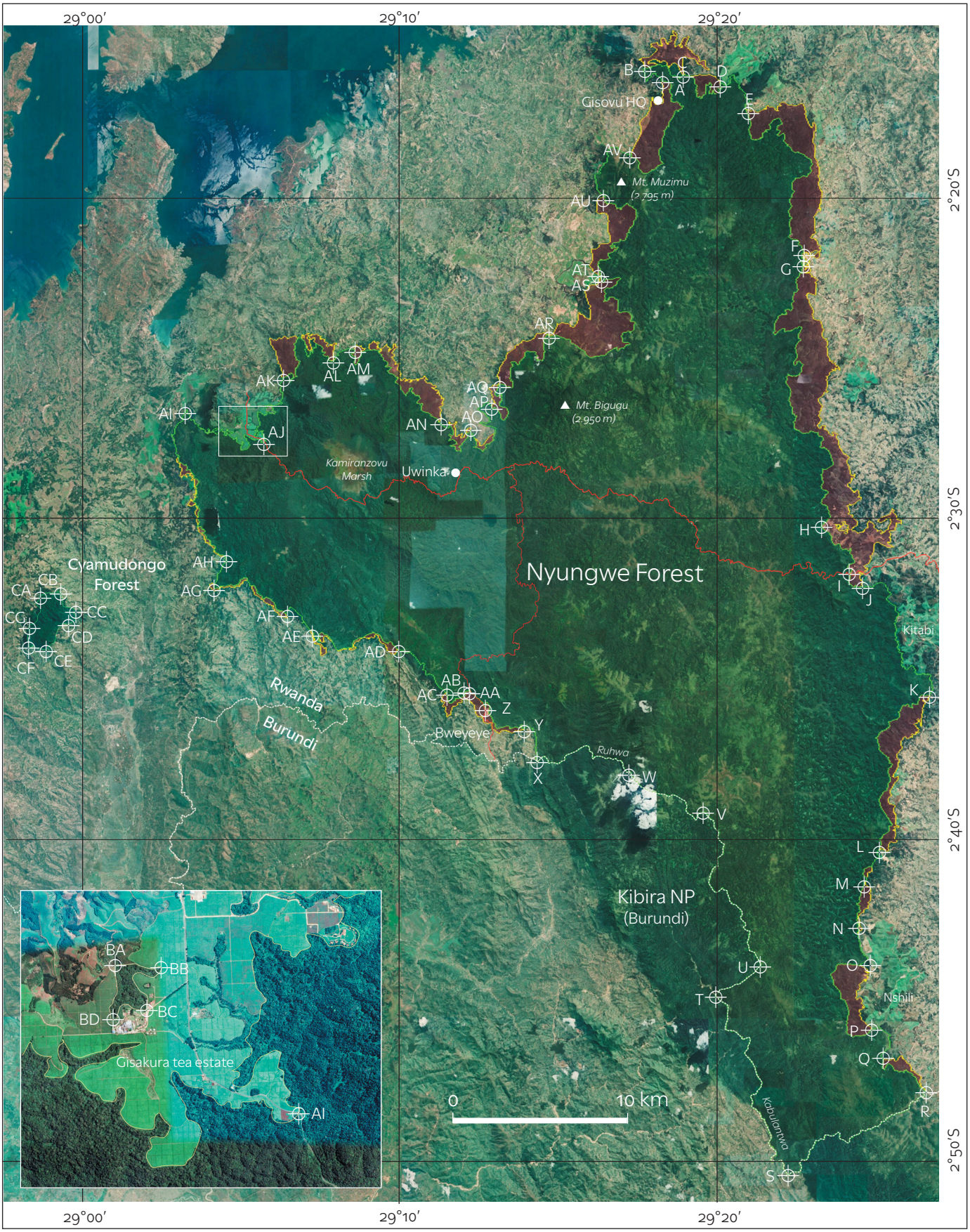
Name of Property

Nyungwe National Park

Geographical coordinates

NNP is composed of the Nyungwe Natural Forest, the Cyamudongo Natural Forest, and the Gisakura Natural Forest.
The overal coordinates are: Centre : 2°33.299'S - 29°12.596'E

North:	2°16.220'S	South:	2°50.404'S
East:	19°26.675'E	West:	28°58.661'E



2. Nyungwe NP with its boundaries, reference points (A-AV, BA-BD, CA-CG), border with Burundi and administrative posts of Gisovu, Gisakura and Uwinka. The Head Quarters will be moved to Gisakura.

Buffer zone (mainly pine plantations).

Textual description of the boundaries

The boundaries of the NNP rarely follow topographical features of the terrain. Rather, they correspond to the places where the pioneer farmers stopped their clearing activities. Sometimes they still follow a small river, a track, or the border between Rwanda and Burundi. This very irregular — almost fractal-like — is nearly impossible to describe in details. It was recorded on the ground and the 745 registered reference points are mentioned in the law 22/2005 of November 21, 2005 (Appendix A1). These coordinates were recorded according to the GCS WGS 1984 system (WCS 1984 UTM Zone 35S). In addition, these boundaries were defined as part of the administrative subdivisions before 2006. Here we give a narrative summary with coordinates in degree and decimal minutes (Table 2) of 62 reference points (Figure 4).

(1) The Nyungwe Natural Forest

Starting from point A, located just north of Gisovu station, the NNP boundary describes a loop to reach point B which is the northernmost point of the forest massif. From there, it heads east, skirting exotic crops and woodlands to reach points C and D. Then, it marks the edge of the Gisovu tea plantations to reach point E. After that, it sets off on small ridges and crosses several valleys to reach point F located further south. Throughout this section, the park is bordered by a rather wide buffer zone of pine plantations. From point F to point G, it is bordered directly by intensive crops. From point G to point H, the boundary runs south, separating the forests of the park from the pine plantations of the buffer zone. At point H it crosses a small river leaving the park to join the Rukarara, one of the heads of the Nyabarongo. Then it crosses the Nyamagabe-Rusizi national road at point I. From point J to point K, the boundary is flanked by a mosaic of eucalyptus groves and the Kitabi tea plantations. From point K to point L, it heads south east and is bordered by pine plantations. From point L to points M and N the boundary is bordered by crops and small woodlands. From point N to point O the boundary is briefly bordered by the Nshiri tea plantations. From point O to point P it is bordered by pine plantations. Then, from point P to point Q it is bordered by crops and from D to point R by pine woods.

From point R to point X, the boundary of the NNP follows the border between Rwanda and Burundi. From point R to point S, it is formed by a small river which flows into the Kabulantwa. From point S to point T, it is formed by the Kabulantwa river which flows in a deep and rather steep valley. From point T and up to points U and V it is formed by ridges that rise in altitude. Point T is also located around 2,600 m at the top of a mountain. From there, it descends and from point W to point X it is formed by the Ruhwa river.

At point X, the boundary leaves the Burundi border and heads north. Up to point Y it is bordered by crops. Then, from point Y to point Z, it is again bordered by pine plantations. From point Z to point AA it briefly runs along the secondary road that descends to Bweyeye. Shortly after, at point AB, it crosses the Koko river, which drains de Nyungwe-Shava-Tangaro basin, and joins point AC. From there, the boundary runs west-north-west to reach points AD, AE, AF, AG, AH and AI. It is bordered sometimes by crops and sometimes by narrow woods of pines or eucalyptus. It runs more or less parallel to the ridges. Between the points AG and AH it runs along the lowest part of NNP located around 1,480 m.

From point AI the boundary moves east again to reach the points AJ and AK. In this section it is bordered by the Gisakura tea plantations which are not part of the legal buffer zone, but which form a very effective *de facto* buffer zone. At point AJ, the boundary crosses the Nyamagabe-Rusizi national road. From point AK to points AL, AM and AN, the very winding boundary is bordered by pine plantations interrupted in places by crops. From point AN to points AO, AP and AQ, the boundary bypasses the Nyirabanda valley. In this section it is bordered by crops and small pine woods. From point AQ to points AR, AS, AT and AU,

the boundary is bordered by very wide pine plantations, briefly interrupted by crops in two places.

From point AU to point AV it bypasses the Muzimu (2,795 m) along its western flank, remaining between 2,300 and 2,450 m and being bordered by crops. Then, it heads north to reach point A while being bordered by a wide belt of pine and eucalyptus woods.

(2) The Gisakura Natural Forest

Gisakura Forest covers approximately 17 ha in a small gulley located just north of Gisakura Tea Factory. It is surrounded to the west, south and east by tea plantations and an almost circular track that runs alongside it. Its extreme coordinates are marked by the points BA, BB, BC and BD. This small forest fragment was included in the park because it is often visited by a group of Angola colobus.

(3) The Cyamudongo Natural Forest

This 430 ha forest is located 9 km west of the Nyungwe Forest. It is surrounded by crops and exotic woodlands and does not have a legal buffer zone, but in many places the exotic woods serve as a *de facto* buffer zone. Its limits are marked by the points CA, CB, CC, CD, CE, CF and CG.

Criteria under which property is nominated

The proposed nomination of NNP is based on criteria (ix) and (x)

Proposed Statement of Outstanding Universal Value

a) Brief synthesis

NNP is part of the Albertine Rift Ecoregion and of the Albertine Rift section of the Afro-montane Regional Centre of Endemism. With its 101,957 ha, it represents the second largest area of mountain forest in this exceptionally rich ecoregion. It covers an altitudinal gradient of 1,470 m (1,480-2,950 m) and harbours a full range of climax, pioneer and secondary forest formations known from this elevation interval. It is not only home to forest habitats, however: it also has bamboo thickets, vast peat bogs located between 1,650 and 2,550 m above sea level, as well as high altitude moors and grasslands. All of its environments are over 95% intact and are therefore highly representative for the mountain landscapes of this ecoregion.

NNP is also one of the only sites of this ecoregion which still ensures the continuation of the various dynamic processes which characterise this montane ecosystem. In particular have to be mentioned the various plant successions which take place within the peat bogs or which characterise the colonisation process of meadows and moors, the interactions between dense forests and bamboo thickets, and the interaction between dense forests and open-canopy forests.

In addition, NNP is home to 89 species of vertebrates endemic to the Albertine Rift and 28 threatened species of vertebrates. It is also home to very rare relict environments of the Last Glacial Maximum (*Cliffortia* scrub) and even from before the Last Glacial Maximum (the at least 43,000 years old Kamiranzovu swamp forests). Besides the Kamiranzovu swamp preserves in the depth of its peat accumulations the pollen archives of the last few hundred thousands of years (perhaps 300,000).

On the whole, the NNP covers the best protected and second largest mountain forest of the Albertine Rift region.

Its fauna is almost complete and the four species which became locally extinct during the latter half of the 20th century (giant forest hog, buffalo, savanna elephant, and leopard) will be reintroduced.

b) Justification for Criteria

Criterium (ix)

The 101,957 ha mountain ecosystem has Outstanding Universal Value due to its relatively large area, its great diversity of forest and non-forest, edaphic and ombrophilous formations, and of very different ages which represent various stages of plant succession taking place in mountain environment. Between closed-canopy and open-canopy forest exist a dynamic equilibrium. Between the vast mountain bamboo thickets and the various types of surrounding forests is another dynamism at work. These interactions remain poorly understood, however. Several large peat bogs, located at varied altitudes, contribute significantly to the richness of the whole ecosystem. These peatlands are not only the seat of internal vegetation cycles, but the ecotones between these peat lands and the swamp forests or the dense *terra-firme* forest are also very dynamic. The whole of this forest ecosystem, with predominant Afro-montane biogeographic affinities, is eminently representative for the natural landscapes of the Albertine Rift Montane Forests Ecoregion. Finally these peat bogs, especially those of the Kamiranzovu basin, preserve exceptional pollen archives spanning several hundred thousands of years.

Criterium (x)

The intact forest ecosystem of NNP supports a wide variety of forest types as well as non-forest montane environments such as grasslands, moors, thickets and peat bogs. These environments are home to a total of 1,468 species of vascular plants (143 ferns, two or three gymnosperms and 1,322 angiosperms). Among these, 240 species are endemic to the Albertine Rift, at least 32 of which are endemic to Rwanda, and 76 species are threatened to varying degrees. Since parts of the forests are hyper-humid with a very abundant flora of epiphytes, the Orchidaceae are particularly well represented with 198 species, 59 of which are endemic to the Albertine Rift with 18 endemic to Rwanda. In all 18 species are threatened to varying degrees.

As for its fauna, this ecosystem preserves currently 101 species of mammals, including 20 endemic of the Albertine Rift, two species endemic to Rwanda and 14 endangered species. Among these species are 14 primate species (or taxa) and the populations of the l'Hoest's monkey and the Albertine Rift race (*ruwenzorii*) of the Angola colobus are probably among the most important for these two species. The population of over 300 chimpanzees is not very large, but it is important for the preservation of the eastern race *schweinfurthii* of this endangered species. The avifauna has 351 species, including 31 (84%) of the 37 known endemic species of the Albertine Rift and 10 threatened species. In particular, NNP is home to the only large population of the Grauer's rush warbler, an endangered Albertine Rift endemic, living in a protected area. Reptiles number 46 species, 14 (33%) of which are endemic to the Albertine Rift but only one species is endangered. Amphibians number 32 species, 21 (69%) of which are endemic to the Albertine Rift and two endemic to Rwanda. In addition, three species are threatened. The entomofauna has at least 290 species of butterflies, including 47 species endemic of the Albertine Rift and 3 local endemic taxa.

c) Statement of Integrity

The NNP covers an area of 101,967 ha. It is totally uninhabited and is over 95% intact. Its buffer zone covers an area of 10,085 ha (Figure 2). It essentially comprises a narrow and discontinuous belt of exotic woods (pine or eucalyptus plantations) whose function is to mark the boundary of the national park, to produce wood for

the human populations of the periphery and to prevent any further encroachment. As Rwandan farmers practice intensive and permanent agriculture, it was impossible to create a wider buffer zone without harming the farmers or degrading the forests. The adjacent regions of NNP indeed support human population densities of the order of 300-420/km^2. Rwandan farmers are strict food producers, however, and rely very little on the spontaneous resources of the park. Also, all water courses flow out of the park so that pollution risks are extremely low.

In the long term, its size, its very rugged and complex relief, its dense hydrographic network, its important gradients in altitude and rainfall, and its very diverse plant formations, make this montane forest ecosystem capable of withstanding climate changes — at least those predicted by the current climate models.

d) Requirements for protection and management

As with all Central African forests, whether lowland or mountainous, poaching is an inevitable threat to wildlife. This threat is much less important than in the Guinean-Congolian lowland forests, but the fight against poaching is an unavoidable necessity. It is done both on the ground within the limits of NNP and among the populations in the form of intelligence gathering. Paradoxically, the high density of human populations around the park, which in itself constitutes a potential threat, facilitates the fight against poaching, because everyone knows what everyone is doing. Boundary encroachment remains also a potential threat in some places. Overall is it only anecdotal. Nevertheless it requires constant monitoring of the boundaries.

Tourism will be developed as soon as possible, including domestic tourism, to generate fund. Apart from essential management activities, research and tourism, no extractive activity is authorised. Bamboo cutting and collection of medicinal plants exist but are not threatening the integrity of the park. Illegal gold or coltan mining are more a problem and require constant monitoring. Many illegal miners come from Burundi. Border surveillance is carried out in collaboration with the army, but it could be made more efficient by the rehabilitation of a track running along the border and accessible only to park staff, military patrols and possibly some tourists.

In the long term the most important challenges are of a socio-economic nature. They are based on the strong demographic growth in the peripheral regions of the park, the great poverty of the peripheral populations and their very low education level. The development of an adequate Community strategy will therefore be of paramount importance.

Along with the fight against poaching and the various surveillance activities, regular monitoring is organised, both of the actions implemented and the results obtained, the state of the main wildlife populations, and the state of the vegetation. Estimates of the populations densities of primates, duikers and other ungulates, as well as of traces of human activity are expected to be organised all over the park every two years. Reintroduction of locally extinct species will be implemented.

All these surveillance and monitoring activities are provided for legally, mainly by the law on the protection of animals and environment.

Name and contact information of official local agency

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