



**Wild Chimpanzee Foundation - Hauptbüro**

c/o Max Planck Institut für evolutionäre Anthropologie  
Deutscher Platz 6,  
04103 Leipzig, Deutschland  
Tel.: 00 49 341 3550 250  
Fax: 00 49 341 3550 299

**Wild Chimpanzee Foundation - Guinea**

BP06, Préf. de Conakry, Quartier Dixinn,  
Conakry, Guinea

**Email:** [wcf@wildchimps.org](mailto:wcf@wildchimps.org)

**Internet:** [www.wildchimps.org](http://www.wildchimps.org)



**Annual Report 2019**

**WCF GUINEE**



**GAC**  
UNE FILIALE D'EGA



## Table of Contents

List of Figures .....	4
List of Tables .....	8
1. Description of key achievements .....	10
1.1. Monitoring Expected Results from the 2018-2020 Action Plan.....	14
1.1.1. Management Objective 1 .....	14
1.1.2. Management Objective 2 .....	18
1.1.3. Management objective 3 .....	22
1.1.4. Management objective 4 .....	26
1.1.5. Management objective 5 .....	28
1.1.6. Management objective 6 .....	30
1.1.7 Management objective 7 .....	33
2. Internal or contextual problems .....	35
2.1. Government/policy change (Action Plan, AP - R1A) .....	35
2.2. Sustainable chimpanzee planning .....	35
2.3. Chimpanzee Offset financial cost estimate.....	34
2.4. Next steps of the project with milestones .....	37
2.5 Change of key personnel.....	37
2.6 Financial status and delays in disbursement of funds .....	42
2.7 Additional funding sources .....	44
3. Technical productions .....	45
3.1. Environmental Strategy .....	45
Biomonitoring of NMBP wildlife with a focus on chimpanzees (PA - R3A.A1) .....	45
Spatially explicit capture-recapture method (SECR).....	46
Bakoun area in the North of the MBNP.....	46
Koukoutamba Zone in the South of MBNP.....	46
Chimpanzee density calculation by capture-recapture .....	47
Chimpanzee social structure and population growth.....	48
Distance sampling method using camera traps (DS) .....	49
Design .....	49
Northwestern part of the National Park .....	49
Extracting distances from phase 1 videos.....	53
MBNP Floristic Inventory (PA - R3B.A1).....	56
Monitoring of Environmental Parameters in the MBNP (R3C.A1) .....	57
Bird monitoring in the MBNP (PA - R3D.A1).....	60
Develop specific inventory themes to increase knowledge of biodiversity in the NMBP (AP - R3D.A4) .....	61
Conduct a study on the social and cultural dynamics of bushfires (PA - R3D.A5) .....	63
4. Stakeholder Engagement Plan (SEPP).....	71
Establish a list of potential partners (PA - R7A.A3) .....	71
Realising potential partnerships (PA - R7A.A5) .....	73
Participate in the creation of innovative financing mechanisms for the management of the	

park management (PA - R7B).....	74
The Middle Bafing National Park is created (PA - R1A).....	74
Establishment of committees (PA - R2A.A3).....	76
Consultation of local communities - Step 1: Participatory mapping of village territories (PA - R1B.A2 and A3).....	83
Consultation with local communities - Step 2: Territorial management plans (AP - R2A.A5) .....	84
Develop an Environmental Awareness, Communication and Education Plan (AP - R5A.A1).....	87
Design communication tools (AP - R5A.A2) .....	87
Development of an environmental education programme: Club P.A.N. (PA - R5A.A5 and A6).....	88
<b>5. Community Training Plan.....</b>	<b>90</b>
Restoring forest cover and ecosystem functioning in key areas (PA -R1F.A1) .....	91
Tree Nurseries (PA - R1F.A2 and A3) .....	94
Develop agreements on the process of reforestation on degraded forest landscapes (AP - R1F.A2, A3, A4).....	97
Definition and implementation of an agro-ecological development strategy (AP - R2B.A2) .....	98
Assisted natural regeneration pilot project with Leading Farmers (PA - R2B.A8).....	102
Measures relating to the populations settled in the fully protected area of the MBNP developed and validated by stakeholders (PA - R2C) .....	106
<b>6. Training Plan for the OGPR .....</b>	<b>106</b>
MBNP Enforcement Monitoring System (PA - R1D).....	107
Implement a Social and Environmental Impact Assessment (SEA) study (PA - R6A.A1).....	108
Establish the Middle Bafing National Park Management Unit (PA - R6B.A1) .....	109
Strengthen the capacities of the Directorate General of the OGPR and support them in their mandates (PA - R6B.A2) .....	109
Write the development and management plan for the Moyen-Bafing National Park and the annual operational plan (PA - R6B.A7 & A8).....	110
<b>7. Evaluation of the state of execution of actions and achievement of results .....</b>	<b>111</b>
Establishment of a results-based monitoring and evaluation mechanism (PA - R6F.A1)...	111

## List of figures

Figure 1. Conceptual map illustrating the Theory of Change, its tests (red font) and the chain of logic that links the Offset/Middle-Bafing NP project(s) with the main types of activities carried out (orange polygon) .....	13
Figure 2. Estimated costs of the Middle-Bafing/offset chimpanzee national park by assuming a total of USD 48 million over 15 years and based on 2019 and 2020 budgets (blue solid line). However, we know that there will be additional costs for the construction of national park infrastructure (estimated costs of approximately USD 500,000 over 3 years) and for effective support to local communities (estimated costs of approximately USD 1 million per year) (dashed blue line) .....	36
Figure 3. Graph illustrating the different stages for the execution of conservation activities in the NMBP, those of community support in the NMBP, the signing of the PPP contract, the execution of the environmental and social impact study, the signing of the Presidential Decree, and the validation of the NMBP Development Plan. The arrows are placed in chronological order, with the arrows starting earliest being presented first, and for each arrow the goals, their definition and the chronogram are specified .....	38
Figure 4. Organisational growth in number of employees for fiscal year 2019 .....	39
Figure 5. Organizational chart of the WCF team as described in the action plan, with updates (January 2020) .....	40
Figure 6. Location of the study area for the Capture-Recapture Protocol (SECR) in the classified forest of Bakoun in the NMBP (left) and details of the location of the 100 trap cameras in the 100 cells of 1 km <sup>2</sup> .....	46
Figure 7. Location of the study area for the Capture-Recapture Protocol (SECR) in the Koukoutamba region and the classified forest of Bani in the PNMB with details of the location of the 100 trap cameras in the 100 cells of 1km .....	47
Figure 8. Accumulation curve of the identification of adult males in the SECR zone of the Bakoun forest in the North of the NMBP. On the x-axis, the precise date when a new identification could be made .....	48
Figure 9. Accumulation curve of the identification of adult females. On the abscissa, the precise date when a new identification could be made .....	49
Figure 10. Percentage of age classes in the chimpanzee community sampled in the Bakoun Forest by the SECR design. 36% of individuals are adults, suggesting a rather growing population .....	50
Figure 11. Age pyramid (right) for Bakoun chimpanzees (SECR design) by studying the size and sex of chimpanzees captured by the cameras. The numbers of individuals in each age and sex class were calculated by taking the maximum number of different individuals in each age and sex class seen in the sequences .....	50
Figure 12. Location of cameras for the DS method in the south of the park following a randomly stratified design based on forest class strata used preferentially by chimpanzees in the MBNP .....	52
Figure 13. Screenshot of the first video confirming the presence of the golden cat (Caracal aurata) in the MNBP .....	53

Figure 14. Some results recorded from the cameras, aardvark ( <i>Orycteropus afer</i> ), hippopotamus ( <i>Hippopotamus amphibius</i> ), chimpanzees ( <i>Pan troglodytes verus</i> ), giant pangolin ( <i>Smutsia gigantea</i> ) .....	55
Figure 15. Geographical distribution of water-level scales in the MBNP .....	58
Figure 16. Water level according to month .....	59
Figure 17. Monthly water level of two networks: the streams connected to Bafing and Falémé rivers.....	59
Figure 18. Water levels in tributaries by month .....	60
Figure 19. Rainfall and average temperature recorded by 4 metrological stations across the MBNP .....	60
Figure 20. Map of the location of bird species observed in the MBNP.....	61
Figure 21. Signs of animals found in the area preselected for tourism, especially near the Bafing River, in November and December 2019.....	63
Figure 22. Average number of fires detected at 10-day intervals throughout the MBNP over a 10-year period, with a maximum of 5 within a 1-km pixel .....	65
Figure 23. Map of bush fire impact/intensity within the MBNP .....	65
Figure 24. a) Maps of HCV sites in the park (left) and b) areas involved in the programme to train communities in firebreak construction and early savannah burning (right).....	67
Figure 25. Controlled burns in the Laffa Boubhe management area.....	68
Figure 26. Map of MBNP indicating the HVC zones protected by controlled burns and fire-break measures.....	68
Figure 27. Bush fire dynamics November - December 2019; a) map of the park with burned areas in relation to zones (left); b) in relation to forest cover (right).....	70
Figure 28. This figure shows the main (red), primary (orange) and secondary (grey) stakeholders and their positions in relation to the biodiversity management and conservation project in the MBNP .....	71
Figure 29. Rencontre à Dabola, Avril 2019 (gauche) et à Tougué, Avril 2019 (droite)....	73
Figure 30. Organisation of village communities in the form of village committees with their members (top); Candidates for the post of President in Mareinfaya (bottom left); the President, the Secretary General and the Treasurer designate of the VCCC of Kalinko Konkero (bottom centre); elected President, the Treasurer and the Secretary General of the VCCC of Kalinko Missira (bottom right).....	79
Figure 31. Structure of local community organisations in the NMBP .....	80
Figure 32. Complaint and grievance management scheme for effective monitoring and impartial conflict resolution. Honorary members of the village committees will play the central role in this procedure and will be in charge of assessing whether complaints and grievances concern the project or are the responsibility of other operators. If they fall within the project's jurisdiction, they will forward the complaint to the project which will provide proposals for resolution of the complaint which will then be negotiated through the	

committee with the complainants. If the resolution is not possible, the complaint will then be forwarded to the authorized Communal Assembly .....	81
Figure 33. Plenary presentation of the Billan des activités 2019 du PNMB and reflection on animal husbandry in Dabola; committee work on animal husbandry in the PNMB in Labé.....	82
Figure 34. Participatory mapping in Balabory (left) and Mounge Dow (right).....	83
Figure 35. Map of currently registered sacred sites in the MBNP.....	84
Figure 36. Location map of the 28 pilot villages identified during CCP3 .....	86
Figure 37. PGTv process in the villages of Sangan, Bossiko Ley and Bossiko Dow (left); PGTv process in the village of Lallabara (right).....	86
Figure 38. Example of awareness panels in the park (above); community awareness with the 3rd theatre campaign in the park (below) .....	89
Figure 39. Club PAN team with supervisors and teachers .....	90
Figure 40. Map illustrating the overlay of HCV zones and the evolution of forest cover between 2017 and 2019 .....	92
Figure 41. Map illustrating the overlay of identified connectivity breaks and the evolution of forest cover between 2017 and 2019 .....	93
Figure 42. Map presenting the connectivity analysis on forest cover change between 2017 and 2019.....	93
Figure 43. Map presenting the connectivity analysis on the evolution of forest cover between 2017 and 2019 according to the identified areas of connectivity breakage.....	94
Figure 44. Installation of fencing .....	96
Figure 45. Meeting to make nursery sites available to the committees of the villages concerned .....	96
Figure 46. RNE site at Sotirey Dow after clean-up (top); bush firewall around Sotiré RNE area (bottom) .....	97
Figure 47. Training on the creation of GIEs in Laffa Boubhé.....	98
Figure 48. Maintenance of a hive in Koulifakara and brood training in Kalinko Konkero.....	99
Figure 49. Transplant training in Sangan.....	101
Figure 50. Sowing formation in Sangan .....	101
Figure 51. Preparation of beans for sowing in Sangan .....	101
Figure 52. Potato seeds for sowing in Kalinko Missira .....	101
Figure 53. Preparation of garlic, ginger and chilli biopesticide at Kalinko Missira.....	101
Figure 54. Biopesticide training at Kalinko Missira .....	101
Figure 55. Preparation of FounGANI fungicide .....	101
Figure 56. Q&A session with parents .....	101

Figure 57. Culinary preparation training session.....	101
Figure 58. Nutrition training .....	101
Figure 59. Training on anti-erosion in Lallabara.....	103
Figure 60. Awareness raising on agroecology by Farm Leaders in Lallabara.....	103
Figure 61. Left-Mamadou Oury Diallo (Bossiko Dow), Right- Traore Bailo (Foungany).....	103
Figure 62. Left- Meeting between the WorldVision Mali and PNMB teams in Bamako and Right Visit of an RNA field in Ouelediedo in the Kolokani circle with the Eco-agri team in the Sahel.....	104
Figure 63. Construction work on Bellakouré market (right); fence-laying work on Lallabara plain (right) .....	105
Figure 64. Map locating the Lallabara plain and the permanent water source Gadha amar.....	105
Figure 65. Grid of planned patrols in the management zones of Middle Bafing National Park for the year 2019 .....	108

## List of tables

Table 1. Tests of the Theory of Change of the 2018-2020 Action Plan (Sep. 2019 version).....	11
Table 2: Monitoring the Expected Results of the Action Plan 2018-2020 .....	14
Tableau 3. WCF staff recruitment plan for the year 2020 .....	41
Tableau 4. Dollar amounts in 2019 for local services / employment in the MBNP by month and by function .....	42
Table 5. Summary by management objectives of the budget of the 2018-2020 Action Plan. It is important to note that management objective O6 includes in its budget the entire payroll of the park management team and thus also the costs of park staff carrying out the actions of the other management objectives.....	43
Table 6. List of donors and expenditures in 2019.....	45
Table 7. List of mammals and catch rates for the DS design in the North-West, the SECR design in Bakoun; highlighted in orange are the indicator species of the 2018-2020 Action Plan for our theory of change test.....	51
Table 8. Preliminary abundance estimates for 4 out of 6 of our 2018-2020 Action Plan indicator species in the north-western part of the MBNP .....	54
Table 9. List of Threatened Flora Species (19 + 4 to be determined) in the NMBP (WCF et Kew, 2019) (EN- Endangered, CR - Critically endangered, VU - Vulnerable, NT - Near Threatened) .....	57
Table 10. Distribution of water-level scales in the MBNP by stream and watershed .....	59
Table 11. Signs of animals found in the area preselected for tourism in November and December 2019 .....	62
Table 12. Information analysed over 4 and 10 years of bush fire observations within the Middle Bafing National Park with NASA FIRMS (observation over the whole MNP and a buffer zone of 15km, i.e. 13,561.38km <sup>2</sup> ) .....	64
Table 13. Organization of actors for the implementation of the bushfire strategy .....	66
Table 14. The early ignition and firebreak teams were made up of project managers, town hall officials, cantonments and local communities (contractors).....	68
Table 15. Synthesis of annual fire-use practices.....	69
Table 16. NMBP Zoning Guidelines .....	77
Table 17. Number of participants who attended the creation of the Committees.....	78
Table 18. Example of complaints received in 2019 by the Complaints and Grievance Committees .....	81
Table 19. Number of programs based on Rural Radio (RR) Partners .....	88
Table 20. Condition of packets, filling and sowing of seeds in the nursery .....	95
Table 21. Tree species planted at the 3 sites in the 6 nurseries established in the MBNP .....	95
Table 22. Summary of priority value chains and value chains First 7 pilot villages of the MBNP .....	98
Table 23. Hive habituation rate in the MBNP .....	99

Table 24. Summary of RNA sites in the six (6) pilot villages.....	104
Table 25. List of social infrastructures developed for the park's communities .....	105
Table 26. Average income of households surveyed in 2019 and those regularly monitored to test the level of appropriation of the training given on agroecological models and their income profiles.....	106
Table 27. Presentation of the status of completion of NMBP activities.....	112

## 1. Description of key achievements

Before reviewing the project's detailed achievements for the various management objectives, we will summarize a) how we began to test the theory of change of the 2018-2020 Action Plan and b) how we progressed towards the milestones presented in the same Action Plan.

In the 2018-2020 Action Plan, six different tests of the theory of change have been proposed with a list of deliverables that will make the test effective (Table 1). Clearly, some of the ultimate tests will require long periods of time for effects to become measurable, particularly for chimpanzee population size (Tests 5 and 6). It is important to remember here that chimpanzees have a generation time of 17-19 years and that females first breed at about 12-13 years of age and have a birth interval of 5-6 years. This makes it biologically unlikely to confirm chimpanzee population growth before the 2nd generation. Nevertheless, some tests are based on predictions describing the earlier stages of the theory of change, for which it is important to confirm the functionality of the causal links. For some of them, we could already put in place actions to provide the data necessary for their evaluation (Table 1).

As shown in Table 1, in general, the tools to test the theory of change are being progressively put in place; and we should be able to provide an initial analysis as early as the second year of the project, although we expect results measuring a biological effect predicted by our theory of change to occur only three or four years after project implementation for animal species with low reproductive rates, such as chimpanzees.

In the 2018-2020 Action Plan, Table 2 proposes a series of provisional indicators (milestones) that would allow us to monitor the success of the implementation of the Action Plan. This also allows us to test the effectiveness of our actions. Table 2 below presents the status report on the activities put in place to progress towards the achievement of the temporary milestones for each of the management objectives. We also give some indications on how the next milestones could be achieved based on experience in the field.

Table 2 presents the status of the project based on the indicators validated in the 2018-2020 action plan (Table 2). For each provisional result or indicator, we provide, under '2018 status', the situation at the time of writing the report in 2018 and, for additional results, the expected status based on the results and the experience gained during the implementation of the project. (see Concept Map, Figure 1).

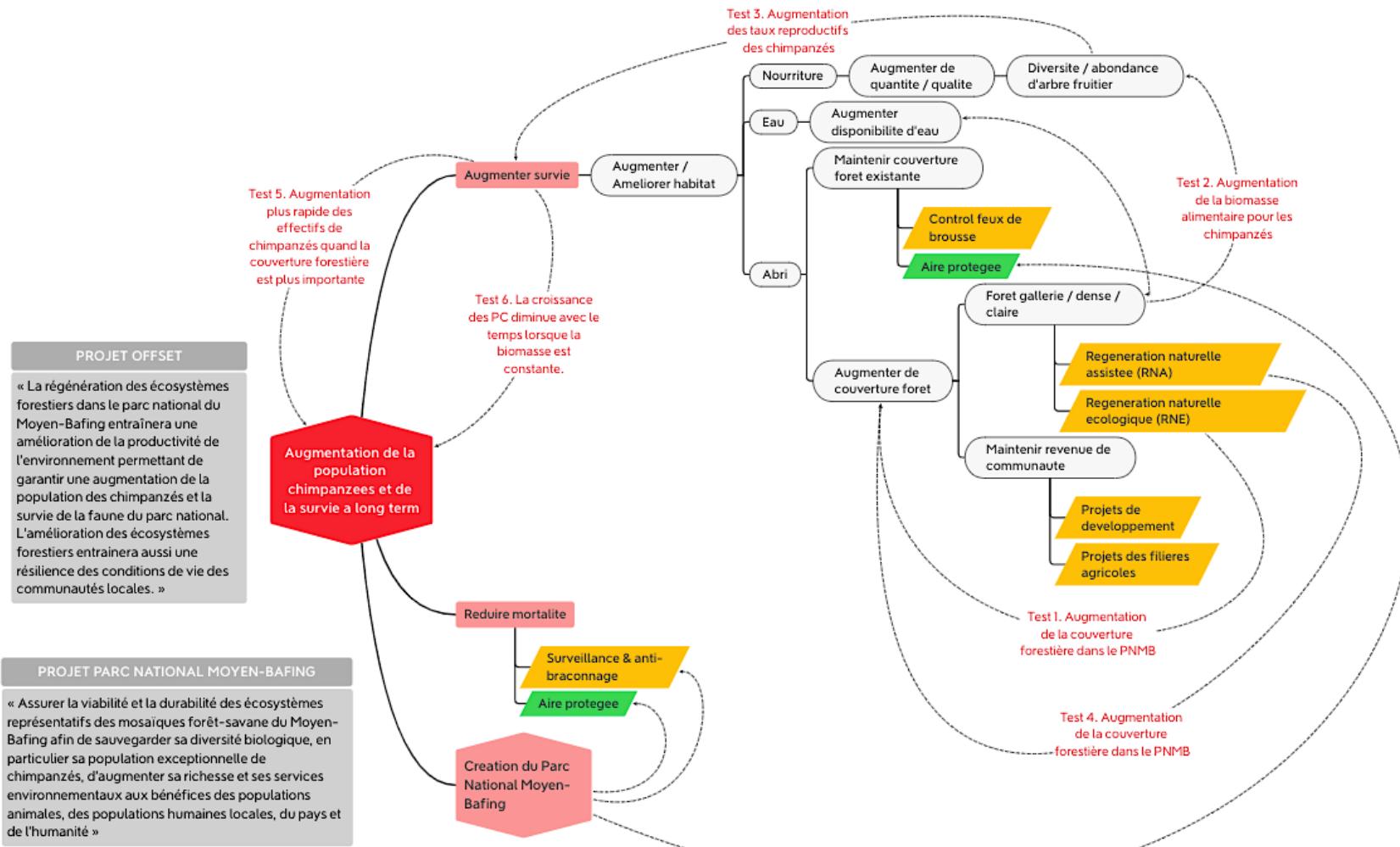
**Table 1.** Tests of the Theory of Change of the 2018-2020 Action Plan (Sep. 2019 version)

Test	Action	Prédiction	Méthode	Mesure	Statut
Test 1	Forest regeneration and reforestation	Increase in forest cover in the NMBP	Comparison of NMBP Land Cover Maps between Different Time Periods	<ol style="list-style-type: none"> <li>Map of the evolution of the forest cover areas (km<sup>2</sup>) in 2017-2019</li> <li>Comparison of forest cover change in forest/savanna and Bowal areas between years.</li> <li>Comparison of areas of dense forest/degraded forest from 2017-2019</li> <li>Comparison of the evolution of connectivity in 2017-2019</li> <li>Comparison of 2017-2019 bush fire zones</li> <li>Comparison of the maximum measured hydraulic values of rivers between years</li> <li>Comparison of the duration of annual dry periods in rivers and streams.</li> </ol>	<ol style="list-style-type: none"> <li>Satellite vegetation data available (MO3) with field confirmations. Annual analysis in progress.</li> <li>An analysis of occurrences in the area prior to project intervention exists,</li> <li>Fire management strategy implemented.</li> <li>The levels of river variation were compared over a rolling 2-year period.</li> </ol>
Test 2	Increase in forest cover	Increasing food biomass for chimpanzees	Phenological transects	<ol style="list-style-type: none"> <li>Index of fruit and biomass availability (IDF) per ha of gallery and open forest</li> <li>Number of plants producing fruit/ha in regenerated forest areas</li> <li>Comparison of 2016-2019 productions</li> </ol>	Data collection model completed
Test 3	Increasing food biomass for chimpanzees	Increasing chimpanzee reproductive rates	Demographic analysis of the chimpanzee (CP) population	<ol style="list-style-type: none"> <li>Proportion of dependent children/adult females</li> <li>Proportion of the number of sub-adults/adults</li> <li>Comparison of the variation in the age pyramid of indicator animal populations over time</li> <li>Analyses of the same factors for the indicator species listed in AP 2018-2020<sup>1</sup></li> </ol>	<ol style="list-style-type: none"> <li>Development and data capture with camera-traps in progress (North-West completed, South in progress and launch in North-East)</li> <li>Video analysis in progress (North-West finished, South in progress)</li> <li>Identification of adult male and female chimpanzees in the 2 zones of Bakoun and Koukoutamba</li> <li>Demographic monitoring of Bakoun chimpanzees over the period 2014-2019 including mortality rates, and age-specific birth rates, first estimate of net reproductive rates (NRR) and intrinsic growth rate (IRR).</li> </ol>
Test 4	Assisted Regeneration Plans (ARPs) and Climate-Intelligent Agricultural Practices (CIAs)	Increase in forest cover in the NMBP	MBNP High-resolution vegetation distribution map	<ol style="list-style-type: none"> <li>Comparison of the ratio of fallow land area / area of village territories</li> <li>Comparison of the ratio of old fallow areas / total fallow areas</li> <li>Comparison of the ratio of forest area (including old fallow land) / land area</li> <li>Comparison of forest area in fields under NAS</li> </ol>	Available satellite data on vegetation (MO3) Annual analysis in progress

				5. Comparison of the ratio of field area under NAS to traditional field area	
<b>Test 5</b>	Density-dependent effect	Faster increase in chimpanzee numbers when forest cover is greater	Combined map of vegetation distribution and evolution of CPs	<ol style="list-style-type: none"> <li>1. Comparison of the annual variation in abundance of CPs and other indicator species (DS and SECR approach)</li> <li>2. Comparison of population growth of CPs and other small area indicator species in areas with different forest cover (HCV and non-HVC areas)</li> </ol>	Data from tests 1, 2, 3 will be available on an annual basis.
<b>Test 6</b>	Carrying capacity effect of the environment	CP growth decreases over time when the biomass is constant	Combined map of vegetation distribution and evolution of CPs	<ol style="list-style-type: none"> <li>1. Comparison of CP abundance and other species according to different types of environment</li> <li>2. Comparison of the growth of CPs and other indicator species over time in areas with constant biomass production and areas with increasing biomass</li> </ol>	Data from tests 1, 2, 3 will be available on an annual basis.

CP = Chimpanzee population

1 = Due to the very slow reproductive rate of chimpanzees, we suggested that 5 other animal species with a higher reproductive rate than chimpanzees should be monitored in addition to the chimpanzees, while giving us important indications on the state of the environment of the national park. These are baboons, vervet monkeys, warthogs, black-backed duikers, harnessed bushbuck, and leopards (Table 2, Appendix 1 of AP 2018-2020).



**Figure 1.** Conceptual map illustrating the Theory of Change, its tests (red font) and the chain of logic that links the Offset/Middle-Bafing NP project(s) with the main types of activities carried out (orange polygon)

## 1.1. Table 2: Monitoring the Expected Results of the Action Plan 2018-2020

### 1.1.1. Management objective 1

Management objective 1	Expected results	Intermediate results	Status 2019	Intermediate results 2	Status 2019	Intermediate results 3	Status 2019
<b>Improving protection conditions to ensure the integrity of the NMBP and the regeneration of its natural habitats</b>	<b>R1A. The MBNP is created</b>	The constituent elements of the PNMB are available (mapping of the PNMB boundaries and village territories, management principles, agreements).	<ul style="list-style-type: none"> <li>❖ A data management model was proposed in order to ensure a good collection-centralization-processing/analysis-archiving/securitization-dissemination of information from the field (KOB0 software was installed for data collection during the DS missions and for the sociological monitoring of fires)</li> <li>❖ Maps of the interim park boundary are available, and a review of the outer boundary is underway to consider geographic, land and administrative features, as well as the addition of new territories</li> <li>❖ Maps of all village territories are available</li> <li>❖ Distribution maps of NMBP values available</li> </ul>	The presidential decree is signed	<ul style="list-style-type: none"> <li>❖ Signature of the decree planned for the end of 2020</li> <li>❖ The agreement for the creation of the drafting group was obtained at the Cabinet of the Ministry of Environment, Water and Forests in May 2019. Tdrs and a list of members will be produced in September 2019</li> <li>❖ Two Interdepartmental Commissions held in 2019 (in May and September) to harmonize the approaches of 3 projects in the PNMB area (Park, Dam and Mines)</li> <li>❖ Field mission from 18 to 24 June 2019 with the representatives of the commission to consolidate the strategic document to be presented to the assembly of stakeholders.</li> </ul>		

	<b>R1B. The specific regulations of the NMBP zones are defined and known to all.</b>	The zoning plan is validated by all stakeholders	<ul style="list-style-type: none"> <li>❖ The validation of the limits of the 3 zones according to village territories is planned in 20201.</li> <li>❖ The negotiation of the VMPs includes this dimension, and the 3 zones were discussed at the various CACs and PCCCs. The validation of the park boundaries will be done with the established governance structures up to the communal level.</li> <li>❖ Production of first 5 PGTVs available and 2 under development with local communities.</li> </ul>	MBNP By-Laws are available	<ul style="list-style-type: none"> <li>❖ A first methodological draft of the guidelines and rules for the use of the zones is available.</li> <li>❖ A regulation of the use of the zones has been discussed.</li> <li>❖ The first signs will be installed in the third half of 2019.</li> <li>❖ 42 signs for the baselines, the park areas granted in the PGTVs, and for the project intervention sites are being produced.</li> </ul>	Agreements on specific mechanisms for managing the MBNP's zonal resource management are signed	<ul style="list-style-type: none"> <li>❖ 2 are being negotiated with the communities through their representatives (local governance structure at the village level) and the involvement of the Communes in the specific process of defence and RNE/ reforestation.</li> <li>❖ Within the framework of the PGTV (territory), 152 ha are put in defense for the year 2019, 55 ha are initially planned for reforestation / RNE and 25 additional ha of RNA are planned for exploitation this year.</li> </ul>
	<b>R1C. The artificial boundaries of the NMBP and its zones are marked</b>	Boundary field data is analysed and visualized on geo-referenced maps.	<ul style="list-style-type: none"> <li>❖ A geo-referenced database has been created and is systematically updated.</li> <li>❖ A discussion is underway to amend the boundaries to strengthen connectivity in the northern corridor</li> </ul>	Mixed patrols between MBNP officers and communities along the demarcated boundaries are carried out.	<ul style="list-style-type: none"> <li>❖ 3 quarterly patrol plans were executed in 2019 (Q2, Q3 and Q4);</li> <li>❖ 24 patrols organized in 2019, 892 grids of 2.5 km out of 1141 grids, i.e. 4188.95 km travelled by 35 ecoguards.</li> <li>❖ Training of 52 eco-guards on the use of cybertracker/ SMART carried out in April, September and November 2019</li> </ul>	The number of kilometres of boundaries materialized and documented per year is consistent with the validated plan.	<ul style="list-style-type: none"> <li>❖ Expected in 2020 depending on the signing of the Order in Council or will be postponed when the first NMBP 2021-2025 Land Use Plan is implemented.</li> <li>❖ Proposals for revisions to the limits have been documented based on the proposed</li> </ul>

							biological limits. Social and geographic dimensions have been integrated to facilitate understanding of the boundaries.
<b>R1D. The monitoring and anti-poaching mechanism of the NIP is established</b>	The MBNP Poaching Monitoring and Enforcement Strategic Plan is available	<ul style="list-style-type: none"> <li>❖ The strategic plan is under discussion with partners</li> <li>❖ A version of this plan will be tested internally in mid 2019<sup>1</sup></li> </ul>	The monitoring procedures manual is consolidated for validation	<ul style="list-style-type: none"> <li>❖ The procedures manual discussed with partners in 2019</li> <li>❖ A project data management guide has been produced that incorporates the monitoring data management procedure</li> </ul>	Information from field activities and patrol posts is analysed and transmitted in accordance with the procedures described below	<ul style="list-style-type: none"> <li>❖ Three iterative reports for quarters 2, 3 and 4 are available in 2019<sup>2</sup></li> <li>❖ The reports are analysed at each patrol planning stage and shared at the end of 2019.</li> </ul>	
<b>R1E. The area covered by monitoring increases each year</b>	SMART software is installed and a geo-referenced database is used	<ul style="list-style-type: none"> <li>❖ The SMART programme is operational, a specific management procedure is available</li> <li>❖ A geo-referenced database is operational</li> </ul>	The proportion of 2.5x2.5 km <sup>2</sup> quadrats covered by patrols is documented and increases every year	<ul style="list-style-type: none"> <li>❖ 35 ecoguards, 16 community animators, 4 supervisors, 4 wardens trained in the use of the cybertracker-SMART.</li> <li>❖ 78.18% coverage rate was achieved in 2019 in 12 monitoring missions in 7 out of 8 management zones.</li> <li>❖ A SMART database is available</li> </ul>	Each year the number of new patrol posts created, equipped and operational increases until reaching the optimum in the last year of the Action Plan.	<ul style="list-style-type: none"> <li>❖ First construction / rehabilitation planned in 2020 after the Decree</li> </ul>	
<b>R1F. The various degraded ecosystems are regenerated due to forestry programmes</b>	The agreements with the communities for the protection or defence are	<ul style="list-style-type: none"> <li>❖ The Environmental Strategy is finalized (2019)</li> <li>❖ 7 PGTVs are under development (28 planned for 2020)</li> </ul>	Annual forest cover monitoring reports with 2 levels of	<ul style="list-style-type: none"> <li>❖ Map of the evolution of the forest cover is available</li> </ul>	Water levels in the regenerated catchment areas show a positive evolution	17 watercourses have been equipped, and monitoring is documented on the 102 watercourses identified as priorities in order to define a	

	signed in the identified areas.	❖ Implementation of the bush fire management strategy in the highly impacted HCV zones (166 km <sup>2</sup> /480.64 km <sup>2</sup> ), areas at risk (461.5km <sup>2</sup> /843.85 km <sup>2</sup> of grassy savannah in particular) from the start of the season at the village level with the support of village committees and communes (42/43 villages)	definition available as of 2019		(fewer dry months, and less variations) (end 2020)	perennial system that supports the rainy seasons. Evaluation after 2019
--	---------------------------------	---	---------------------------------	--	--	---

1. The validation process involving different partners requires time to allow for proper ownership before validation. It is to allow this process to take place that we observe some delays. It does not act as a consequence of a delay in relation to the initial planning in order to allow for a more efficient continuation of the project. Convincing results have already been achieved in terms of strengthening the Wildlife Act.
2. A two-pronged approach is adopted by the project with, on the one hand, community monitoring by village eco-guards and, on the other hand, sworn officers to strengthen law enforcement. This second team will only really enter into an effective phase once the PPP agreement of the management unit has been signed and will therefore be operational a little later than planned here.
3. The communities have food production imperatives that do not allow them to wait for the first results of our forest regeneration projects, and therefore deforestation will not be reduced until the first concrete results are available to the communities. It should be noted that in 2018-2019, there may have been fewer fires in the forests classified in the pilot villages area.

### 1.1.2. Management objective 2

Management objective 2	Expected results	Intermediate results	Status 2019	Intermediate results 2	Status 2019	Intermediate results 3	Status 2019
<b>Strengthen the involvement of the surrounding populations in the conservation of natural resources in the MBNP</b>	<b>R2A: Consultative committees improve acceptance of the NMBP and facilitate the creation of co-management processes for its natural resources</b>	Community participation and the number of Community Management Committees is increasing	<ul style="list-style-type: none"> <li>❖ The CC4 will be finalized in 2020</li> <li>❖ Organisation of a first national monitoring committee at the end of 2019</li> <li>❖ The methodology for the creation of village committees exists</li> <li>❖ A complaint and grievance registration mechanism is operational. Formation of 9 committees (Foungani, Kalinko Missira, Kalinko konkero, Lallabara, Sangan, Balabory, Koulifakara, Dakasiré, Laffa Boubhé). Synergies are under discussion with ANAFIC</li> <li>❖ Installation of 22 village committees including 9 inter-village committees in the pilot villages.</li> </ul>	Areas regenerated and secured by use plans and the first Village Land Management Plans (PGTVs) are finalized and validated	<ul style="list-style-type: none"> <li>❖ 3 new working groups are created and trained in nursery management bringing the total to 6</li> <li>❖ General interest groups, such as for reforestation and fire are created, structured and trained in the 7 pilot localities of the PGTVs and throughout the MBNP for monitoring</li> <li>❖ 214 ha of forest under negotiation (defenses, reforestation, RNE and RNA) with the village committees in 2019 for the rainy season</li> <li>❖ A methodological guide for the elaboration of PGTVs is produced.</li> <li>❖ The first 5 PGTV drafts are being finalized and 2 are under negotiation with the local</li> </ul>	Consideration in agreements with communities of customary and legalized supply, park regulations, cultural and spiritual values	<ul style="list-style-type: none"> <li>❖ PGTV agreements included the dimension of customary and cultural rights</li> <li>❖ A specific analysis is conducted by a sociologist and the known sites are geo-referenced</li> <li>❖ Additional sociological studies are currently being carried out to take into account the cultural and customary dimension of the use of natural resources and space</li> </ul>

			<ul style="list-style-type: none"> <li>❖ 15 A3CDs have been set up, the statutory documents have been sent to the prefecture for legalization</li> <li>❖ Two missions were organized in Tougué and Dabola with opinion leaders, local elected officials and decentralized technical services and a meeting was held with the associated sub-prefectures under the aegis of the Governor of Mamou</li> <li>❖ Two workshops, in Labé and Dabola, bringing together local authorities and community representatives to discuss achievements</li> </ul>		communities concerned until 2020		
<b>R2B. The management of the NMBP has contributed to the socio-economic development of</b>	The strategic plan for community and rural development for the distribution of benefits and	<ul style="list-style-type: none"> <li>❖ Socio-economic study is validated</li> <li>❖ Creation of a guarantee fund for micro-credit is discussed (2020)</li> <li>❖ Community support projects and trainings have</li> </ul>	The economic Value Chain analysis demonstrates the sustainability of the benefits to be achieved by the players, excluding	<ul style="list-style-type: none"> <li>❖ First Economic Interest Group in the Honey and Wax VACs created, structured and trained. 7 villages received material support and beekeeping</li> </ul>	Elaboration of indicators, reference situations and targets	<ul style="list-style-type: none"> <li>❖ Ongoing analysis of the gains envisaged for the various targeted value chains (also market gardening, peanuts, fonio, etc.) and the technologies provided</li> </ul>	

	<b>neighbouring communities</b>	assistance to riparian communities is consolidated for validation.	<p>started in 20 pilot villages, of which 16 villages have benefited from training and 4 from sensitization.</p> <ul style="list-style-type: none"> <li>❖ A formal link between the VGMPs and the LDPs of the communes has been established, with the 15 communes and NAFIC. Within this framework, 11 community infrastructures were started in 2019 in 9 pilot villages of the PNMB.</li> <li>❖ The agroecological strategic plan is finalized with GRET</li> <li>❖ A gender and vulnerable person strategies are being finalized</li> </ul>	major external risks.	<ul style="list-style-type: none"> <li>❖ equipment (Sangan, Koulifakara, Lallabara, Laffa Boubhe, Kalinko Konkero, Kalinko Missira and Fougani) - 35 beekeepers, including 14 women, received support</li> <li>❖ CVA shea butter is under study</li> <li>❖ Specific studies for NTFPs are being finalized.</li> <li>❖ RNA activities: Awareness raising on agro-ecology for the community by the PLs, Monitoring and advising of plots, Training on stone barriers.</li> <li>❖ Market gardening activities: Follow-up and advice on plots, training on biological fungicides and provision of garlic seeds for the production of biopesticides.</li> <li>❖ Rainfed crop activities: Training on soil preparation, compost and crop associations and</li> </ul>		<ul style="list-style-type: none"> <li>❖ indicators for monitoring beneficiaries are available</li> </ul>
--	---------------------------------	--	--	-----------------------	--	--	---

				provision of boots and raincoats for PL.		
<b>R2C. Measures relating to the populations settled in the NMBP ZIP are developed and validated by all stakeholders.</b>		<ul style="list-style-type: none"> <li>❖ The framing study finalized with INSUCO and Biotope</li> <li>❖ 2 missions have taken place specifically to identify the spectrum of possible measures, and these will be integrated into the PGTV to be negotiated</li> <li>❖ The populations of these enclaves have participated in various consultations, and have been targeted for outreach activities</li> <li>❖ A study is underway on the rules for the use of space and natural resources in this specific case of landlocked villages.</li> </ul>	<p>The rate of adoption of natural resource management modalities for each community located in the NMBP is analysed and documented.</p>	<ul style="list-style-type: none"> <li>❖ Draft NMBP Bylaws exist</li> <li>❖ Communities are frequently informed of the rules through various communication channels, and this semester traffic signs were installed at 42 sites.</li> <li>❖ The methodology for participatory mapping of villagers' territories exists and the protocol will soon be launched on the 26 enclaves (end 2019).</li> </ul>	<p>The rate of environmental violations in the areas under agreement with these communities is known and decreases every year.</p>	<ul style="list-style-type: none"> <li>❖ Monitoring system is in place and is being strengthened. In quarter 2 (8 eco-guards and 4 facilitators), in quarter 3 (16 eco-guards and 8 facilitators), in quarter 4 (35 eco-guards and 16 facilitators). To date, the teams have visited all 7 management zones. The data was collected using SMART</li> <li>❖ The regular recording of transactions and offences is effective</li> </ul>

1. The activities planned under result R2C of the 2018-2020 Action Plan have been delayed, because basic data on village territories and their uses were needed and have been completed.

### 1.1.2. Management objective 3

Management objective 3	Expected results	Intermediate results	Status 2019	Intermediate results 2	Status 2019
<b>Improving the management of the NMBP on the basis of monitoring and research results</b>	<b>R3A. Animal populations with a high conservation value are monitored</b>	A harmonized bio-monitoring plan is available to be proposed for validation	<ul style="list-style-type: none"> <li>❖ The harmonized bio-monitoring plan exists</li> <li>❖ The data collection campaign has been underway since February 2018 and is in the 2nd phase. The 3rd during Q1 2020. To date, 45 different species of mammals have been captured on video.</li> <li>❖ Individual identification of 54 male and 47 female chimpanzees in a 100km<sup>2</sup> area established manually (66 males have been noticed in addition).</li> <li>❖ A total of 627 adult female chimpanzees were seen on the videos, of which 337 were carrying a child.</li> <li>❖ First estimation of densities of 5 priority animal species in the north-western zone of the park: Baboons, Cobe, Harnessed bushbuck, chimpanzee.</li> <li>❖ Validation of chimpanzee identification by 2 independent groups and confirmation by male identification software<sup>1</sup></li> <li>❖ 203 bird species (28% of the known avifauna of Guinea) have been recorded in the Middle Bafing National Park. 6 are fully protected at the national level according to the new Wildlife Code: African Vulture, Scavenging Vulture, White-headed Vulture, Rüppell's Vulture, Forbes Plover, Peregrine Falcon. In addition,</li> </ul>	<ul style="list-style-type: none"> <li>❖ The spatial distribution of the target species of conservation concern is known.</li> <li>❖ The abundance of animal species with a short reproductive cycle is stabilised or increases.</li> <li>❖ The abundance of animal species with a long reproductive cycle is stabilised.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Spatial distribution maps of the target species for the 2014-2016 inventories are available</li> <li>❖ Quarterly reports on wildlife monitoring by cameras available. Presence-absence table of 45 species in classified forests and available corridors (the protocol is in place for the 2 new species).</li> <li>❖ The abundance of animal species will be available at the end of 2019 and trends in the evolution of animal populations with 2016 data will be analysed in 2020 (initial findings show that the southern part of the NMBP would be the most important).</li> </ul>

			<p>some of the species listed are threatened on a global scale: these include the 4 identified species of Vulture, the Abyssinian Bucorva. Other species at the limit of their range, uncommon in West Africa or endemic to the biogeographical domain have also been identified: Gonolek de Turati, White-browed Cossyphé, Ayres Eagle, Buzzing Lark or Natal Nightjar.</p>		
	<p><b>R3B. Knowledge of ecosystems in the NMBP is improved</b></p>	<p>An adapted monitoring system exists and reinforces the knowledge on the evolution of the ecosystems of the MBNP.</p>	<p><u>Environment:</u></p> <ul style="list-style-type: none"> <li>❖ Strategy for habitat monitoring is established and implemented, KEW study has allowed the finalization of reports and methodology for habitat mapping (2nd map in production).</li> <li>❖ Mapping of habitats by semi-automatic classification method (February 2016, 2017, 2018 and 2019), based on ground truth points and on a coloured composition showing differences in land use.</li> <li>❖ Object-oriented classification COO has shown even more interesting results in class discrimination</li> <li>❖ Diachronic analysis of the evolution of habitats in the territories of Koulifakara - Lallabara and Laffa Boubhe for tests: comparison between satellite images and semi-automatic classifications of February 2016 and February 2018, as well as the new image of February 2019, digitization of cleared or regenerated areas, calculation of the surface areas of each habitat, etc.</li> <li>❖ Bush fire monitoring and management strategy is established</li> </ul>	<p>The level of the PA reference ecosystem is known conservation status, exploitation, pressure factors and potential threats.</p>	<ul style="list-style-type: none"> <li>❖ The future Moyen-Bafing National Park (PNMB) has 281 plant species, including 19 endangered species present to date in the different types of vegetation. It is the only place known for two globally endemic species (<i>Barleria asterotricha</i> and <i>Dissotis linearis</i>) and home to a large population of the globally threatened species <i>Lipotriches felicis</i>, <i>Cyathula pobeguinii</i>, <i>Macropodiella garrettii</i>, <i>Danthoniopsis chevalieri</i>, and <i>Leocus pobeguinii</i> - the PNMB has the only recent records of these. Four potential new species were identified in 2018, and three additional species were identified for the first time in Guinea.</li> <li>❖ 8 sites with tourism potential have been identified in the classified forest of Boula, between Boula and Bendougou: 3 cliffs with spectacular views of the Bafing River, as well as 2 other spectacular viewpoints, 3 rapids and a magnificent waterfall. A site</li> </ul>

			<p>and tested in 2019, the mid-term evaluation of the implementation was presented to the local authorities in Labé and Dabola in December.</p> <p><u>Community Development</u></p> <ul style="list-style-type: none"> <li>❖ Detailed agroecological diagnosis is available and the data collected during the diagnostics allow to propose and initiate rural development projects.</li> <li>❖ Community Development Strategy presented</li> <li>❖ Strategy for the involvement of vulnerable people</li> </ul>		<p>of chimpanzee algae fishing tools has also been identified for chimpanzee habituation, for the first time in this area.</p>
<b>R3C. The monitoring of ecological parameters in the NMBP is organized as follows</b>	An adapted monitoring system exists and reinforces the knowledge on the evolution of the ecological parameters of the MBNP	<ul style="list-style-type: none"> <li>❖ A protocol for monitoring ecological parameters for the NMBP has been finalized.</li> <li>❖ Specialized measuring instruments have been purchased and installed in the NMBP (17 scales are operational on 102 priority streams and 4 weather stations); 40 new scales are available and will be installed in Q1 2020.</li> <li>❖ Fire Vulnerability Map of NMBP areas exists (Forest Connectivity and HVC areas cross-referenced with fire impacted areas).</li> </ul>	Definition of indicators for the synthesis of Ecosystem Services rendered with a reference situation	<ul style="list-style-type: none"> <li>❖ Data on water level variation are available for the year 2019 and will be used as a reference for monitoring</li> <li>❖ In terms of rural development, the yield data per station, practice and speculation, the number of trees per ha for the RNA, etc., are recorded in an indicator monitoring system to be finalized.</li> </ul>	
<b>R3D. Applied research themes are prioritized</b>	The list of priority research themes is validated by the stakeholders	<ul style="list-style-type: none"> <li>❖ Ornithological inventory carried out</li> <li>❖ Inventory of NMBP flora completed</li> <li>❖ Studies on the diversity of fishery resources have started, 25 sampling points have been selected on the entire hydrographic network of the NMBP area and will be finalized in Q1 2020.</li> <li>❖ Amphibian inventory (2019-2020)</li> </ul>	Definition of overall indicators of the maintenance of MBNP values	<ul style="list-style-type: none"> <li>❖ A definition of the indicators is ongoing, and will be validated when the GAP is drawn up in 2020.</li> <li>❖ A baseline value based on our full knowledge of the NMBP will be available.</li> </ul>	

			<ul style="list-style-type: none"> <li>❖ Study of the annual diet of chimpanzees (Acquired phenological monitoring methodology, implementation 2nd semester 2019)</li> <li>❖ Study of the biodiversity of regenerated forests (2019-2020)</li> <li>❖ Strategy developed with GRET defines research themes for agroecology</li> <li>❖ Study on the socio-cultural dynamics of bush fires: a first report is available, and the study will be continued in 2020.</li> <li>❖ Study on the socio-economic dynamics of artisanal gold panning in the Northeast of the NMBP (2019)</li> <li>❖ Study on water quality in the NMBP, exchanges are started with the Guinean Bureau of Environmental Studies Evaluation (BGEEE) to start in 2020.</li> </ul>		
--	--	--	--	--	--

<sup>1</sup> Preliminary results of individual identification of chimpanzees suggest a larger population in the MBNP than that obtained with the conventional line transect method (WCF 2016). Should this result be anticipated due to the known limitations of the line transect method used previously, it is critical to have an independent validation of this result. For this purpose, we will continue the individual identification of chimpanzees by the WCF team in Labé, but also by a team of Chimps&See from the Max Planck Institute in Leipzig ([www.chimpandsee.org](http://www.chimpandsee.org)), which has years of experience in the identification of chimpanzees. These identifications will then be confirmed by an individual identification program of DrivenData Inc. (USA) ([www.drivendata.org](http://www.drivendata.org))

### 1.1.3. Management objective 4

Management objective 4	Expected results	Intermediate results	Status 2019	Intermediate results 2	Status 2019
Facilitate the operation of the Park by providing it with adequate infrastructure and equipment	<b>R4A. Buildings essential to the management of the NMBP are constructed and/or rehabilitated</b>	A prioritized and costed plan for the implementation of the infrastructures exists	<ul style="list-style-type: none"> <li>❖ Installation plan for field bases and patrol stations is proposed for the creation phase of the NMBP</li> <li>❖ Programmed support from the UNDP project to support the development of the architectural plan for the monitoring infrastructure of the NMBP</li> <li>❖ Provisional operational management in Labé and Conakry, the latter although functional is located in a sensitive area with regard to the upcoming elections, and the former is becoming close with the staff currently mobilized. In both cases, solutions will be proposed at the end of the second quarter</li> </ul>	Buildings essential to the management of the park have been constructed and/or rehabilitated	<ul style="list-style-type: none"> <li>❖ 5 field bases are operational (Laafa, Dara, Kansangui, Bourouumba and Fello Koundoua). Kela is in the process of opening but for the moment the site has not yet been found.</li> <li>❖ Prioritized and costed plan planned with the Park Development and Management Plan</li> </ul>
	<b>R4B. Improvements to the priority road network support the management of the NMRP</b>	A prioritized and costed plan exists for the rehabilitation or construction of the road network	<ul style="list-style-type: none"> <li>❖ Geo-referenced road network data is centralized to select priorities for work to be carried out (end 2019)</li> </ul>	The terms and conditions for financing priority infrastructure are defined and agreed by the stakeholders	<ul style="list-style-type: none"> <li>❖ Planned for the end of 2020</li> </ul>
	<b>R4C. Vehicles and equipment are available and operational</b>	Vehicles and equipment are operational according to identified needs	<ul style="list-style-type: none"> <li>❖ Inventory management plan, maintenance, available</li> <li>❖ Two new 4x4 vehicles and 8 new motorcycles were purchased during the second half of the year to bring the total number of VHLs to 9 4x4 cars (including 6 in the field, 1 for OGPR, 1 for coordination at the</li> </ul>	All the vehicles and equipment provided for in the Action Plan are operational	<ul style="list-style-type: none"> <li>❖ Vehicles and equipment were acquired in 2019 to launch the management phase of the NMBP.</li> <li>❖ All this equipment is operational in 2019, and there are tools for monitoring monthly vehicle consumption. A GPS positioning system has been installed on all</li> </ul>

			<p>Labé office and 1 VHL dedicated to return trips between Conakry and Labé) and 29 field motorcycles (type YAMAHA AG). 11 new motorcycles have been ordered. Purchases of equipment including computers, field equipment, GPS and other equipment</p>		<p>cars allowing live location, remote stopping (=anti-theft protection), driver and fuel tracking</p>
--	--	--	--	--	--

#### 1.1.4. Management objective 5

Management objective 5	Expected results	Intermediate results	Status 2019	Intermediate results 2	Status 2019	Intermediate results 3	Status 2019
<b>Improve the visibility of the NMBP to increase awareness of its importance and ensure its sustainability.</b>	<b>Village communities are sensitized and their skills strengthened</b>	The environmental awareness and education plan has been established and approved by the communities.	<ul style="list-style-type: none"> <li>❖ Plan has been established and is in the process of being approved by some partners<sup>1</sup></li> <li>❖ Discussions for community approval have started<sup>1</sup></li> <li>❖ The NMBP Logo was designed on the basis of joint proposals made with the Directorate General of the OGPR. Its presentation and validation should be done for the signature of the Order</li> </ul>	Teaching material for extension is available for each locally developed theme	<ul style="list-style-type: none"> <li>❖ The material necessary for the realization of the PAN club schools is available in 2019.</li> <li>❖ 7 schools have been rehabilitated in the villages of Fello Kollet, Laffa, Kouratongo, Dara, Kalinko centre, Kela and Kounet.</li> <li>❖ Awareness-raising and communication materials on priority themes: agro-ecological practices, uncontrolled bushfires, deforestation, poaching, the PNMB and its conservation values are printed and a distribution plan according to the targeted actors is set up.</li> <li>❖ The convention has been updated with the 4 rural radio stations bordering the Park (Koubia, Tougué, Dinguiraye and Dabola).</li> <li>❖ The theatre tour took place from 04/11 to 12/12/2019. 16583 participants including 4096 men, 5547 women and 6940 children participated in the 28 pilot villages.</li> <li>❖ Awareness-raising on the priority themes of the PNMB, bush fires, poaching and human-wildlife cohabitation, with 4758 people sensitized,</li> </ul>	Number of teachers trained each year and number of hours of teaching cumulated on the themes promoted	<ul style="list-style-type: none"> <li>❖ Information on training and teaching hours is available from 2018.</li> <li>❖ Planning and training of 17 PAN club teachers and supervisors for the implementation of the new 2019-2020 season in 10 schools.</li> </ul>

					including 2963 women in 50 villages of the PNMB		
<b>Disseminate the biological and demographic results of the NMBP</b>	A website is created and put online	<ul style="list-style-type: none"> <li>❖ WCF website is active (2018)</li> <li>❖ Information about the NMBP are published on the WCF Facebook page since 2018</li> </ul>	Number of popularized publications	<ul style="list-style-type: none"> <li>❖ The first scientific publications were published in 2018 on chimpanzees, and at least one more is being prepared on mapping territories and settlement history.</li> <li>❖ A total of 17 articles on MBNP development activities on the following topics: MBNP biodiversity, MBNP employability, awareness raising, monitoring, beekeeping, nurseries, RNE, RNA, consultation frameworks, world events related to biodiversity, mapping, etc.</li> <li>❖ 265 radio programmes produced and broadcast, 14 audio-visual programmes produced</li> </ul>			

<sup>1</sup> Le processus de validation impliquant différents partenaires requiert du temps afin de permettre à ceux-ci d'avoir le temps de se l'approprier et de le valider. En outre, cela s'imbrique dans un processus de rédaction et développement des standards de gestion de l'OGPR, qui depuis le début de l'année est désormais un office à gestion administrative et financière autonome.

### 1.1.5. Management objective 6

Management objective 6	Expected results	Intermediate results	Status 2019	Intermediate results 2	Status 2019	Intermediate results 3	Status 2019
Ensure an efficient and transparent administrative and financial management in accordance with the standards in force	<b>R6A. All environmental and social impacts are identified and quantified</b>	The environmental and social impact study has been validated by stakeholders	<ul style="list-style-type: none"> <li>❖ PEPP is validated, the scoping study is finalized</li> <li>❖ EISE planned for 2020</li> </ul>	Indicators for monitoring environmental and social impacts have been developed as well as data collection and analysis methodologies.	These indicators are under development and will be consolidated in the ESMP in 2020	Quantification of social and environmental impacts are carried out	Scheduled for 2020, and the first pilot households are being monitored
	<b>R6B. Create the management structure of the Middle Bafing National Park</b>	The terms of reference of the Board of Directors (or Management Board), the Governance and Monitoring Advisory Board and the Management Unit are defined and validated by the competent authorities.	<ul style="list-style-type: none"> <li>❖ A PPP contract was presented in early 2019.</li> <li>❖ Discussions are underway with the OGPR and the MEEF to finalize the PPP contract</li> <li>❖</li> </ul>	The Development and Management Plan of the MBNP is validated by the competent authority	<ul style="list-style-type: none"> <li>❖ The drafting of this plan is in progress according to the framework defined by the RPMO, specific support will take place in the 3rd QUARTER 2019</li> <li>❖ A validation is planned for the end of 2020</li> </ul>	The legal structure formalizing the delegation of responsibility for the NMBP Management Unit is endorsed.	The PPP contract is signed in 2020
	<b>R6C. The MBNP's financial resources are managed in accordance with documented procedures</b>	MBNP Human Resources are engaged and deployed	All the main HR, logistical, administrative and financial procedures are available	The Manual of Administrative and Financial Procedures is applied	<ul style="list-style-type: none"> <li>❖ Budgetary monitoring carried out since 2018</li> <li>❖ Setting up the SAGE 100C software</li> </ul>	Monitoring the efficiency of interventions and preparing budget estimates based on realistic unit costs	<ul style="list-style-type: none"> <li>❖ Monthly external audit is applied (since 2018)</li> <li>❖ Budgetary monitoring according to OHADA</li> </ul>

							and international rules is applied (since 2018)
	<b>R6D. A recruitment and training plan is developed and implemented</b>	The recruitment and training plan available	<ul style="list-style-type: none"> <li>❖ Recruitment plan is available (2018)</li> <li>❖ Human resources increased from 9 employees in January 2018 to 101 in August 2019.</li> <li>❖ The Training Plan will be elaborated in the 2nd Semester 2019.</li> <li>❖ 22 training themes were developed and given to 1602 beneficiaries, including 1055 women and 546 men</li> </ul>	All categories of personnel have ToRs	<ul style="list-style-type: none"> <li>❖ Fully implemented since mid 2018</li> <li>❖ 64 categories of positions have PDPs available</li> </ul>	Staff assignment notes are available and correspond to identified needs	Fully implemented since March 2018
	<b>R6E. A mechanism for evaluating staff performance is put in place</b>	Procedures related to performance evaluation are defined	<ul style="list-style-type: none"> <li>❖ Evaluation Policy is defined (2019)</li> <li>❖ It will be validated in 2019</li> </ul>	All staff are evaluated annually	Evaluation will start to be applied at the end of 2019.		

	<b>R6F. Achievement of programme objectives is monitored and evaluated</b>	Indicators are defined for the monitoring of each milestone result of the Action Plan over its period of validity.	<ul style="list-style-type: none"> <li>❖ Assessment sessions are conducted quarterly (since 2018);</li> <li>❖ Improvement of indicators based on new information from monitoring of fauna, flora, socio-economic studies, RNA diagnosis, sector and agro-ecology;</li> <li>❖ An annual report is produced (since 2018)</li> </ul>	The annual activities of the Action Plan, described in the Operational Plans, are carried out at a minimum of 75%.	<ul style="list-style-type: none"> <li>❖ Achievement rate in the 1st quarter 2018 is 69%, and in the 2nd quarter 76%.</li> <li>❖ At the end of the second quarter, 69% of the Operating Plan remains to be implemented. This is explained by the preparation of the operational activities for the rainy season, the resumption of fires, the calibration of the biomonitoring method, the new school year, the selection of eco-guards, and the delay in the payment of the instalments of the budget.</li> <li>❖ Implementation of a robust methodology for operational monitoring in the process of being operationalized</li> </ul>		
--	--	--	---	--	---	--	--

<sup>1</sup> The environmental and social impact study can only be done once the NMBP implementation project has produced the essential documents concerning its environmental and social strategy as well as those concerning our approach to managing the project's potential negative impacts, risks, conflicts and grievances.

### 1.1.6. Management objective 7

Management objective 7	Expected results	Intermediate results	Status 2019	Intermediate results 2	Status 2019
Ensuring the sustainability of NMBP funding	<b>R7A. Technical, scientific and financial partnerships for priority actions are promoted and secured</b>	The MBNP Business Plan is now available.	<ul style="list-style-type: none"> <li>❖ Business plan will come with the development plan (2020)1</li> <li>❖ Terms of reference for the recruitment of an expert to elaborate the GAP are available, starting in the first half of 2020</li> </ul>	Effective partnership with at least one University and/or Research Institution as well as two NGOs working in rural development is developed	<ul style="list-style-type: none"> <li>❖ Partnerships with GRET, INSUCO, WorldVision Senegal, BIOTOPE, MPI EVA, Kew Garden, Guinean National Herbarium of Nasser University) have been in place since 2018.</li> <li>❖ Others have been launched with FAPI for honey, and exchanges have begun with APN for support in the management of the PNMB, with Foutah Trekking for Tourism, and the Robert Koch Institute in Berlin for animal health, with WFP and UNICEF in Labé.</li> <li>❖ New partnerships are being developed throughout 2019 under the EPPP</li> <li>❖ A partnership with the National Agency for Community Funding (ANAFIC) has been set up in the framework of local development in the 15 communes of the PNMB zone</li> </ul>
	<b>R7B. MBNP managers are active in the development of innovative and sustainable mechanisms</b>	Implementation of at least one specific action linked to the creation of alternative and sustainable sources of funding for the NMBP	<ul style="list-style-type: none"> <li>❖ A trust fund strategy is under discussion with the WB and COMBO project.</li> <li>❖ Support from GEF UNDP Bafing-Falémé to set up an ecotourism programme (mid 2019 delayed)</li> <li>❖ Additional financing obtained from GACF-USFWS, Darwin, ...</li> <li>❖ Search for continuous financing, commitment of specialized expertise</li> <li>❖ 7 funding proposals have been sent, 2 are under</li> </ul>		

			<p>consideration, only 1 has been validated to date, and 1 is in progress.</p> <ul style="list-style-type: none"> <li>❖ Conceptualization of the NMBP EMP approach under development</li> <li>❖ KKT Dam ESMP includes management support to the NMBFN but needs to be reviewed with a joint panel (consideration of mitigation and environmental compensation aspects).</li> <li>❖ IUCN SOS funding for the ongoing Leopard Study</li> <li>❖ Funding of Regenwald (Rainforest) for Ecological Natural Regeneration (ENR), surveillance patrols and bush fire management.</li> </ul>		
--	--	--	---	--	--

<sup>1</sup> The finalization of a business plan will have to be based on the key elements of the development plan, which will not be available before the completion and validation of the various complementary plans around the 2019-2020 period.

## 2. Internal or contextual problems

### 2.1 Government/policy change (Action Plan, AP - R1A)

Collaboration with the government and in particular the Ministry of Environment, Water and Forestry and the OGPR is developing actively and rapidly. The proposal for the management unit and the management delegation contract has been presented through numerous consultation meetings with these two partners, and a final version of the Public-Private Partnership (PPP) is available.

The creation of this new national park is a multi-faceted process. It requires work at the national level for the official designation of the national park. The Government of Guinea supports this project, but continued advocacy is needed. The formation of a team to propose the terms of the Presidential Decree has been formally accepted, and a first draft is being developed with exchanges on examples elsewhere in Guinea, Africa and the rest of the world.

The creation of the successful national park also requires consultation and close collaboration with the inhabitants of Fouta Djallon living around the park. A new national park also requires imagining the creation of infrastructure and seeking support for the management of the park and, above all, appropriate financial tools and sustainable financing so that the park can be supported in perpetuity.

### 2.2 Sustainable chimpanzee planning

Planning a chimpanzee offset according to IFC PS6 rules requires following Guidance Notes 30 states that "The (biodiversity offset) actions for achieving biodiversity gains must be designed to deliver long-term on-the-ground conservation outcomes". In addition, Guidance Note 33 states that "...establishing appropriate financial mechanisms, such as a conservation trust or non-fund options, to ensure sufficient and sustainable financial flows to implement the offset and ensure that all necessary gains are delivered".

Chimpanzee biology clearly shows that with a generation time of 17-19 years, a first birth in females after 13-14 years, and a birth interval of 5-6 years, it is illusory to achieve the net gain goal in only 15 years. However, 15 years is the duration that was chosen by the IFC for the CBG and GAC offset project. We have repeatedly alerted IFC to this situation but unfortunately IFC has still not taken the measure of the risks of this situation. It is now imperative to be very careful that the short-term 15-year vision does not endanger chimpanzee offset in the long term and that the project management structures that are being put in place are compatible with the long-term goal of chimpanzee offset (IFC PS6 2012).

The uncooperative attitude of the IFC to ensure the long-term survival of the chimpanzee offset project should not prevent the WCF from trying to find a solution, and in accordance with the IFC Guidance Note 20, and the new 73, we have requested the intervention of the IUCN Primate Specialist Group, Great Apes Section to help us find a sustainable solution for chimpanzee offset in the Middle-Bafing.

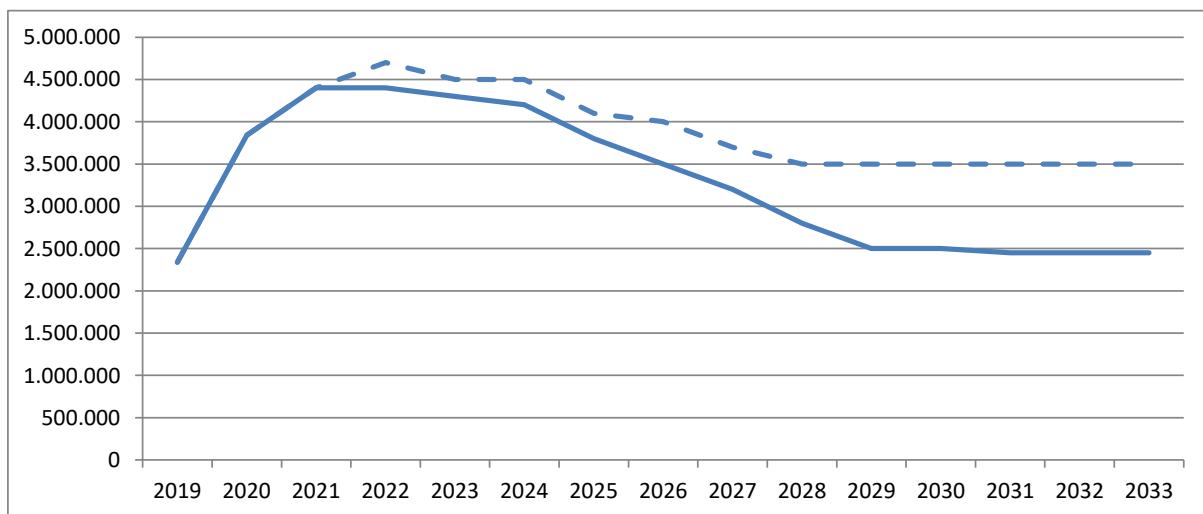
### 2.3 Chimpanzee Offset Financial Cost Estimate

A financial forecast is in the present state rather random and difficult to make precisely. However a first estimate can be made by taking the conditions of the offset of CBG and GAC currently known to the WCF (the figures have never been officially communicated to us at the

WCF). Figure 1 shows this forecast of the costs within the limits of the total offset budget currently foreseen over 15 years (the blue curve continues). It should be noted that the chimpanzees will continue to live after these 15 years and that without additional planned funding, the benefits of the funding may disappear within a period of only a few years in clear contradiction to the IFC SP6.

The blue dotted line in Figure 2 attempts to estimate the actual total costs of the Middle-Bafing National Park / chimpanzee offset by taking into account all necessary costs that exceed the planned CBG/GAC offset budget of only US\$ 48 million over 15 years.

The dotted line in Figure 1 highlights the underestimation of the real needs of the Middle Bafing National Park / chimpanzee offset and should alert us to the urgent need to seek additional funds to make it possible, on the one hand, to achieve the objectives of the offset and, on the other hand, to ensure the preservation of the assets beyond the initial 15-year period.



**Figure 2.** Estimated costs of the Middle-Bafing/offset chimpanzee national park by assuming a total of USD 48 million over 15 years and based on 2019 and 2020 budgets (blue solid line). However, we know that there will be additional costs for the construction of national park infrastructure (estimated costs of approximately USD 500,000 over 3 years) and for effective support to local communities (estimated costs of approximately USD 1 million per year) (dashed blue line).

## 2.4 Next steps of the project with Milestones

In order to facilitate the understanding of the different stages of the project development, the WCF proposes here a figure illustrating these for the most important structural points and illustrating the dynamic and parallel approach of our activities for the establishment of the Moye-Bafing /offset chimpanzees national park (Figure 3). It became apparent that the implementation of activities with the communities would take a little longer than envisaged in the 2018-2020 Action Plan, and therefore, in close consultation with the MEEF and OGPR, it was decided to focus on the outer boundaries of the NP under the Presidential Decree and that details of the 3 zones within the park will be finalized as part of the management plan currently being drafted. Indeed, for this we need the agreement of the 15 communes involved in the National Park after the successful negotiation of the VGMPs for the 28 pilot villages. This process can be long and complex, but above all it must give the communities time to fully understand the advantages and disadvantages of the solutions that are being discussed with them.

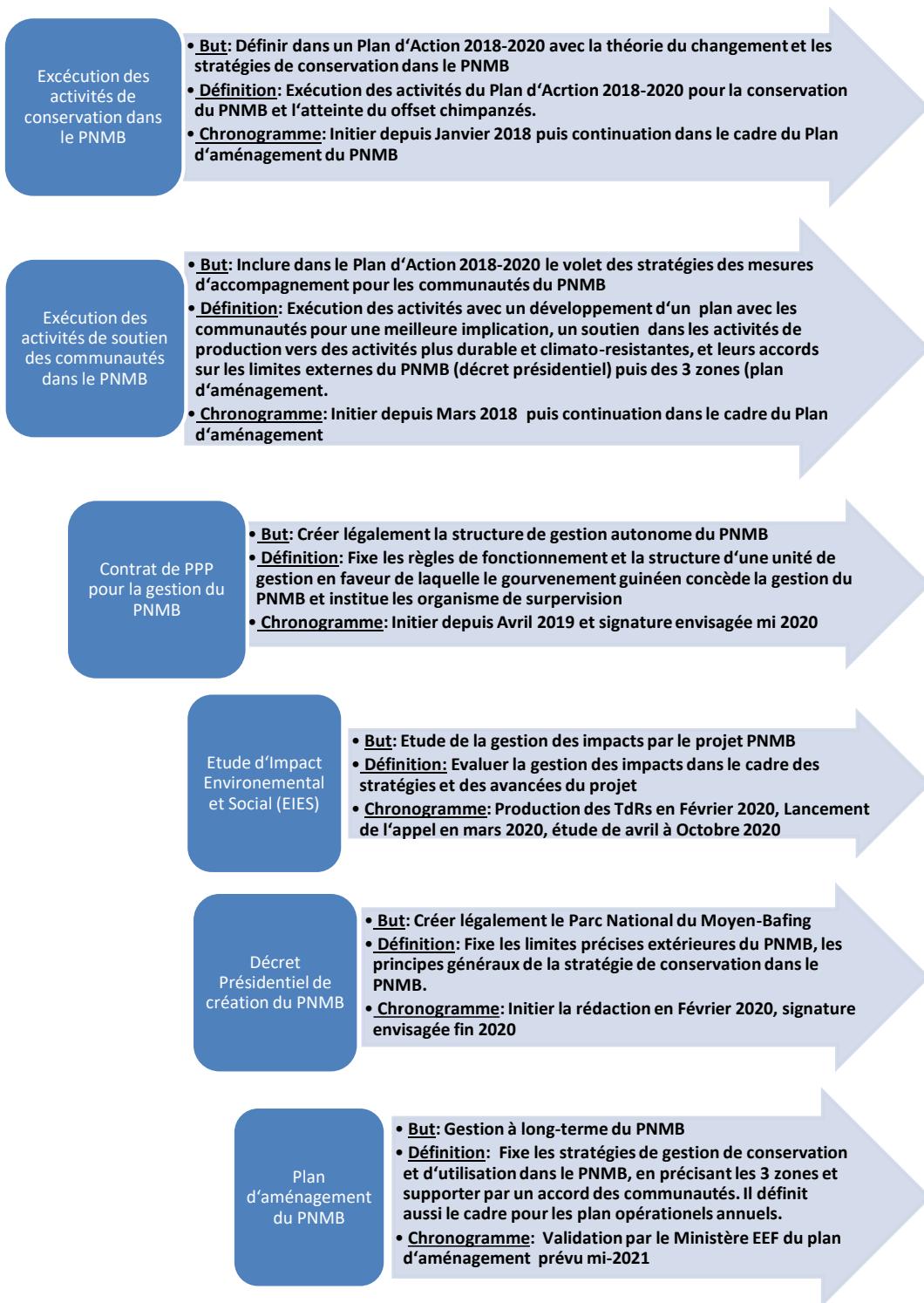
## 2.5 Change of key personnel

As of January 31, 2020, the program has 153 employees (129 national employees, 13 expatriates and 11 OGPR partners permanently assigned to the Project) of 11 different nationalities. The total basic payroll is  $\pm 80,000$  USD. The male/female ratio is 80/20 and the average age is 36 years. The payroll is processed in the SAGE100 PAIE software package since February 2019 (Figure 4).

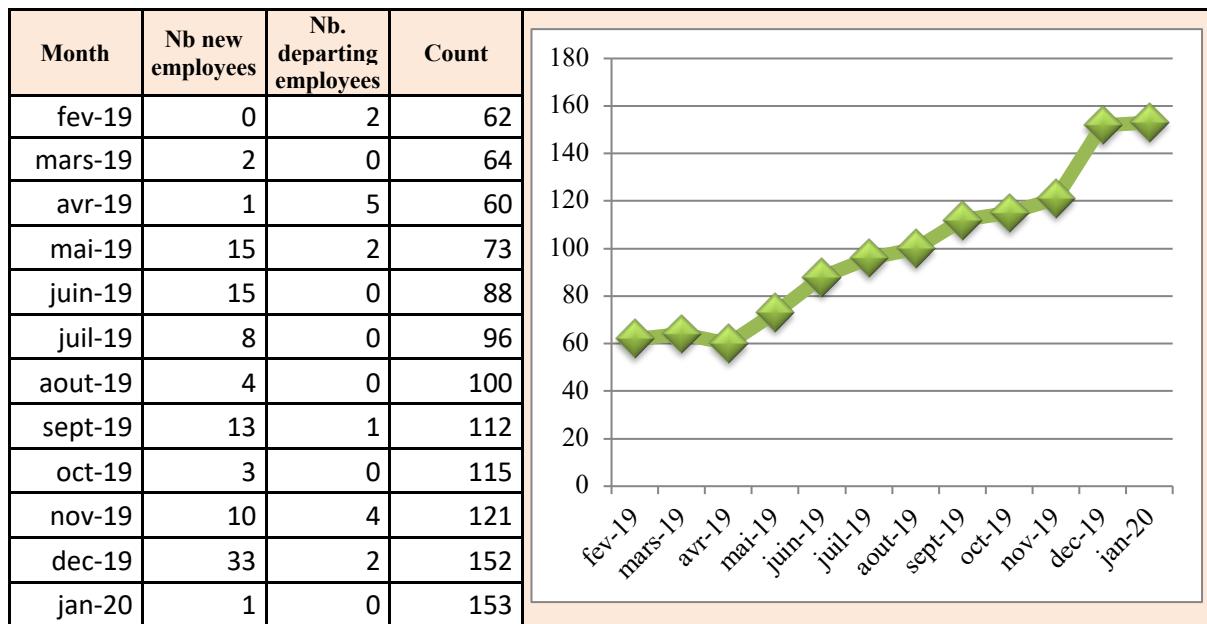
Each employee has a standard contract (validated by our consultants) registered and a detailed job profile (PDP). Taxes are paid monthly and up to date. The employer's HR costs as well as labour costs for national employees have risen sharply, due not only to the increase in the number of employees but also to an increase in income tax and the unilateral increase by the Ministry of Employment of the CNSS contribution base. The WCF thus pays the tax and social security authorities approximately \$9,000/month or \$108,000 annually.

A performance management policy has been developed and will be implemented in the coming year. It will make it possible to evaluate the performance of employees on the basis of objective indicators and to set up a performance bonus system. The same applies to the training policy, which is closely linked to the performance management policy, which must be developed to lead to the implementation of a training plan for the programme's human resources.

One of the last notable achievements on management objective 6 is the implementation of an internal WCF system for the reimbursement of medical care to national and partner employees. The organizational chart shows the current structure of human resources at WCF, including the planned recruitments for the year 2020. The members of OGUIPAR are integrated into the WCF team in this organizational chart (Figure 5).



**Figure 3.** Graph illustrating the different stages for the execution of conservation activities in the NMBP, those of community support in the NMBP, the signing of the PPP contract, the execution of the environmental and social impact study, the signing of the Presidential Decree, and the validation of the NMBP Development Plan. The arrows are placed in chronological order, with the arrows starting earliest being presented first, and for each arrow the goals, their definition and the chronogram are specified.

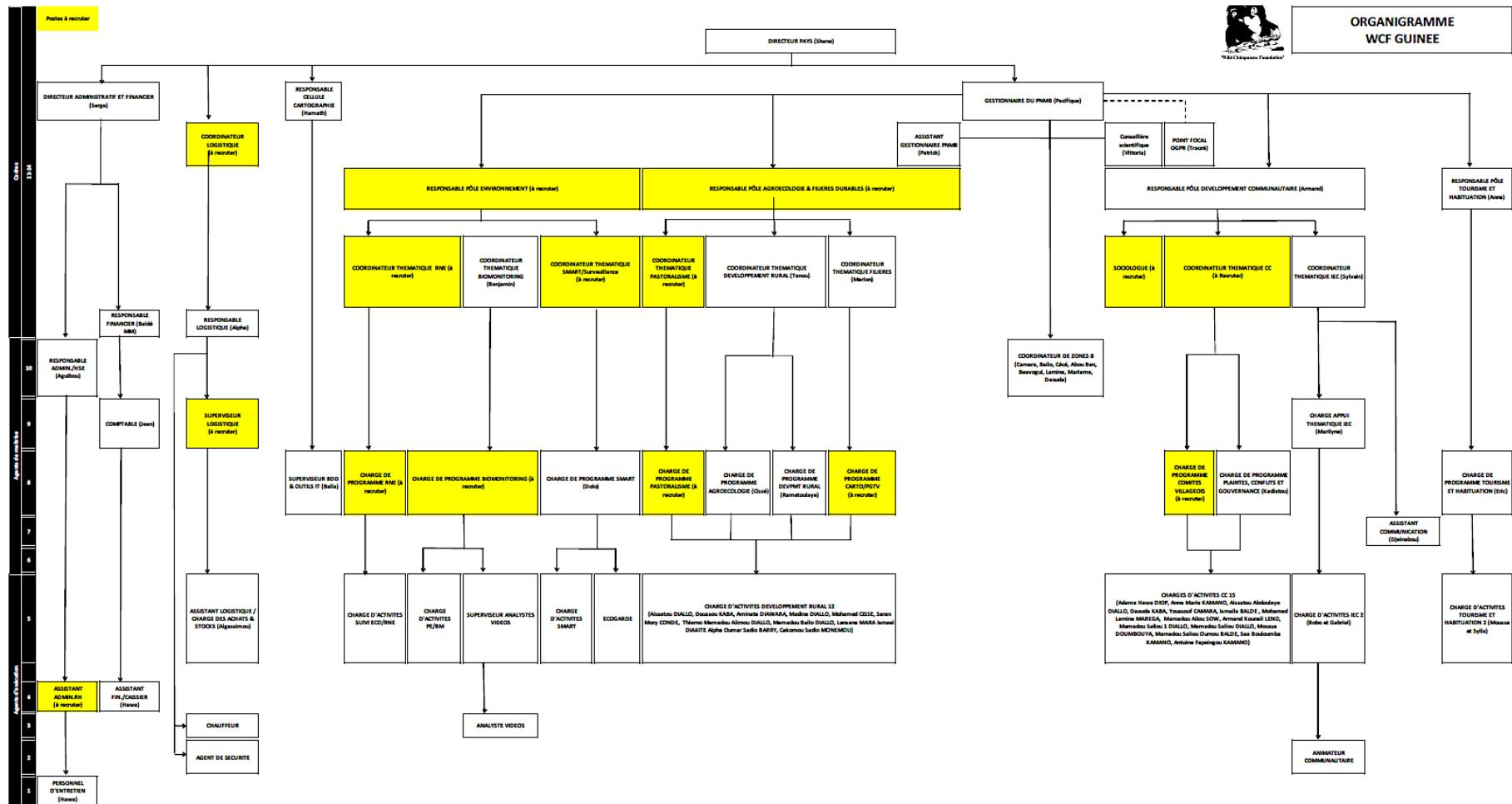


**Figure 4.** Organisational growth in number of employees for fiscal year 2019

The planned recruitment of new national and international positions has not been fully finalized and will be finalized early next year to support the current teams. These include the following functions: Logistics Coordinator (1), Environment Divisional Manager (1), Agroecology and Sustainable Activities Divisional Manager (1), RNE Thematic Coordinator (1), SMART/Surveillance Thematic Coordinator (1), Pastoralism Thematic Coordinator (1), Community Consultations Thematic Coordinator (1), Sociologist (1), Area Coordinator (8), Logistics Supervisor (1), Administrative and Human Resources Assistant (1), RNE Programme Officer (1), Biomonitoring Programme Officer (1), Pastoralism Programme Officer (1), Carto/PGTV Programme Officer (1), Village Committees Programme Officer (1). (Table 3)

Management is evaluating the possibility of a salary review for senior management positions with a view to enhancing the attractiveness of the company's hiring.

Since July 2018 the WCF has been monitoring the evolution of indirect jobs generated in the NMBP as an indicator of its activities. These agents, coming from the communities, provide essential support to the activities of the WCF and participate directly in the involvement of the communities in the creation phase of the park. At the same rate as the management of the NMBP is increasing, these jobs are becoming more and more frequent and numerous throughout the park's territories. This employment is also a significant source of income, helping to improve living conditions by increasing the purchasing power of NMBP households. (Table 4)



**Figure 5.** Organizational chart of the WCF team as described in the action plan, with updates (January 2020)

**Tableau 3.** WCF staff recruitment plan for the year 2020

Vacant positions	Nat/Inter.	Nb of positions to fill	Grade	Position Description	Closing date	Start date	Contract period	Division
<b>Coordinateur Logistique</b>	Inter.	1	12	oui	31/01/2020	à confirmer	12mois	DP
<b>Responsable Pôle Environnement</b>	Inter.	1	13	oui	24/11/2019	à confirmer	12mois	GPNMB
<b>Responsable Pôle Agroécologie et Filières Durables</b>	Inter.	1	13	oui	à publier	à confirmer	12mois	GPNMB
<b>Coordinateur Thématische Pastoralisme</b>	Inter.	1	12	oui	24/11/2019	à confirmer	12mois	AE&FD
<b>Coordinateur Thématische Feux</b>	Inter.	1	12	oui	24/11/2019	à confirmer	12mois	PE
<b>Coordinateur Thématische Surveillance/SMART</b>	Inter.	1	12	oui	01/12/2019	à confirmer	12mois	PE
<b>Coordinateur Thématische Consultations Communautaires</b>	Inter.	1	12	oui	24/11/2019	à confirmer	12mois	DC
<b>Coordinateur Thématische RNE</b>	Inter.	1	12	oui	01/12/2019	à confirmer	12mois	PE
<b>Sociologue</b>	Inter.	1	10	oui	01/12/2019	à confirmer	12mois	DC
<b>Superviseur Logistique</b>	Nat	1	9	oui	à publier	01/03/2020	12mois	DC
<b>Chargé de Programme RNE</b>	Nat	1	8	oui	à publier	01/03/2020	12mois	PE
<b>Chargé de Programme Biomonitoring</b>	Nat	1	8	oui	à publier	01/03/2020	12mois	PE
<b>Chargé de Programme Pastoralisme</b>	Nat	1	8	oui	à publier	01/03/2020	12mois	AE&FD
<b>Chargé de Programme Carto/PGTV</b>	Nat	1	8	oui	à publier	01/03/2020	12mois	AE&FD
<b>Chargé de Programme Comités Villageois</b>	Nat	1	8	oui	à publier	01/03/2020	12mois	DC
<b>Assistant Admin.RH</b>	Nat	1	4	oui	à publier	à confirmer	12mois	ADMIN
<b>Total Intern.</b>			9					
<b>Total National</b>			7					
<b>TOTAL</b>			16					

**Tableau 4.** Dollar amounts in 2019 for local services / employment in the MBNP by month and by function

FONCTION	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Total USD
Agent collecte données pluvio	44	65	55		44	65	55						328
Agent de suivi échelles								370	901		413		1,684
Agent collecte semences												172	
Agent de suivi pépinière	154	153	235		154	153	235	643	2,108	1,282		904	6,043
Agent de suivi pluviométrie								76					76
Agent reboisement								15,369					15,369
Agent étiquetage et pare feux	546				546								1,092
Agent feu											9,714		9,714
Agent mise defense feux												4,734	
Agent paillage											8,103		8,103
Analyste vidéo								2,444					2,444
Construction		132				132							264
Cuisinière								1,084	1,706	2,786	3,219	576	9,370
Ecogarde								1,971					1,971
Gardiennage			98				98						196
Guide	44	654	603	427	44	654	603	2,516	5,246	3,079	6,856	4,125	24,851
Intendance bivouac	606	513	229	589	606	513	229						3,283
Personne relais	15	39			15	39		38	129	30	1,249		1,554
Piroguier										172	343		516
Porteur	61	121	82	60	61	121	82	229	378	830	331		2,354
Puisatier				33			33						65
<b>Total</b>	<b>1,470</b>	<b>1,676</b>	<b>1,334</b>	<b>1,076</b>	<b>1,470</b>	<b>1,676</b>	<b>1,334</b>	<b>24,740</b>	<b>10,468</b>	<b>8,179</b>	<b>30,228</b>	<b>10,511</b>	<b>94,162</b>

## 2.6 Financial status and delays in disbursement of funds

Delays in the disbursement of funds observed in 2018 persist into early 2019 to the extent that the implementation of the 2018-2019 Action Plan and validated planning for 2019 are at risk. However, an improvement in the procedures for the release of funds became apparent at the end of the six-month period.

As a reminder, the Action Plan (2018-2020) validated in March 2018 frames the amount of expenditures as well as co-financing. The WCF has so far contributed to the planned amount. Table 5 shows the total validated amounts of the AP.

The accounting of the Program is encoded in the software package SAGE100 ACCOUNT since February 2019 and certified on a monthly basis by our auditor, the accounting firm SFA, which is a legally recognized firm. The accounting documents are systematically archived electronically (dematerialization procedure to facilitate audits) and sent to the head office for physical archiving. Monthly accounting is reviewed

**Table 5.** Summary by management objectives of the budget of the 2018-2020 Action Plan. It is important to note that management objective O6 includes in its budget the entire payroll of the park management team and thus also the costs of park staff carrying out the actions of the other management objectives.

Management Objective	Budget 2018	Budget 2019	Budget 2020
O1 : Enhance safeguards to ensure the integrity of the MBNP	144,000	376,000	310,000
O2 : Strengthen the involvement of local communities in the conservation of natural resources in the MNBP	277,000	404,565	370,000
O3 : Improving the management of the MBNP on the basis of monitoring and research results	265,000	182,875	195,000
O4 : Facilitate the operation of the Park by providing it with adequate infrastructure and equipment	410,000	337,000	335,000
O5 : Improve the visibility of the MBNP to increase awareness of its importance and ensure its sustainability.	86,000	36,000	69,000
O6 : Ensuring efficient and transparent administrative and financial management in compliance with standards	896,620	1,144,798	1,138,000
O7 : Ensuring the sustainability of MBNP funding	28,000	27,900	53,000
Sub-total *	1,820,094	2,509,738	2,470,000
Overhead (12%)	218,474	301,169	296,400
Grand total	2,039,094	2,810,907	2,766,400

exhaustively then validated by the Country Management. Monthly certification reports are available for the entire year 2019.

In the second year of the Action Plan (2019) it was planned that WCF would provide \$316,777 in co-financing (other donors or own funds). At the time of writing this report WCF can confirm that it has spent \$2,563,000 (of which  $\pm 77\%$  financed by the mining fund), of which one co-funding of nearly \$583,000. Comprehensive budget monitoring by donors and by results of the Action Plan is carried out by the Finance Department, integrating local and headquarters expenditures, and sent to the Country and Operations Departments.

All donor reports were produced and submitted in accordance with donor deadlines and show consumption rates in line with forecasts. The report of year 1 of the mining fund was presented with a 98% consumption rate, that of year 2 of the four-year fund of the DARWIN Initiative with a 100% consumption rate, that of Zurcher Tierschutz with 100% consumption, that of the USWFS fund (GACF) also 100%, as well as that of the Leipzig Zoo (Germany). These various financings generated  $\pm 270,000$  USD in management fees as at 31 December 2019.

Facilitate the operation of the park by providing it with adequate infrastructure and equipment (PA R4.A)

The offices of the WCF are located in Labé, in the municipality of Labé. There are also two rented common houses where some expatriate employees based in Labé as well as employees and/or partners/providers passing through Labé reside. The infrastructure in Labé was partially rehabilitated at the beginning of 2019, i.e. the renovation of the annexes of common house 1 (2 additional rooms), the installation of a solar energy system (in the same common house 1) and the investment of a more powerful generator (30 KVA) for the office. As the Labé office

no longer sufficiently met the needs of the programme, the option was stopped at the end of the year to move the offices to a building more suited to the operational requirements. There is also, in addition to Lafa, Kansogui and Dara, a life base that was opened in Bouroumba in March 2019. Additional living bases are planned to be opened over the next year in Kela, Missira Djalonke, Ndireyanguyea and Fello Koundoua Centre.

The WCF also has a representative office and a temporary apartment in the Camayenne district, commune of Dixinn, Conakry. Considering the increase of activities and passages in Conakry but also the potential security threats that could be posed by the location of these infrastructures near the Independent National Electoral Commission (CENI) and the Supreme Court of Justice following a possible deterioration of the political climate during the 2020 election year, the option of a move is under discussion and could be implemented in early 2020.

During 2019, the Programme acquired or renewed individual field equipment (tents, complete outfits, rucksacks, sleeping bags, mattresses, flashlights, drinking bowls, water bottles, penknives, raincoat) for staff and auxiliaries, for a total value of approximately USD 42,000. The same applies to the technical equipment needed for the various management programs (GPS, tablets and smartphones, computers, scheduling equipment, educational materials, community animation, etc.) worth around USD 40,500.

#### **Vehicles and equipment are available and operational (PA R4C)**

In terms of logistical means, investments have been made in 2019 amounting to approximately USD 260,000. This mainly involves the purchase of 11 new AG160 motorcycles, a 6-seater Hilux TOYOTA pickup and two (2) TOYOTA Land-Cruiser, bringing the current fleet to 11 4x4 vehicles (including 8 in the field (in the park), 1 for the OGPR, 1 for coordination at the Labé and/or Conakry office, and 1 dedicated to shuttles between Conakry and Labé) and 40 field motorcycles (type YAMAHA AG).

A GPS positioning system has been installed on all vehicles allowing live location, remote stopping (anti-theft protection), driver and fuel tracking. This system supports and objectively supports the already existing management tool which precisely establishes the mileage travelled and fuel consumption. All this equipment is rigorously controlled and monitored using a management tool (inventory specifying in real time the user, location, purchase value, condition, etc.).

It is planned for next year to identify and formalize a partnership with a mechanical garage including the supply of original parts to Labé, at the same time as an analysis of the opportunity and cost of organizing a maintenance service within the logistics department of the Labé office will be conducted. In addition, with the restructuring and strengthening of the logistics department, a procedures manual for the allocation, monitoring and maintenance of vehicles and equipment will be drawn up and implemented over the next year.

#### **2.7 Additional funding sources**

##### **Identify and mobilize additional sources of funding (PA - R7A.A2)**

In the past year, five funding applications were sent to the following donors: FFEM/AfD (900,000 euro project), IUCN SOS "Save Our Specialties" (400,000 euro project over 18

months), Illegal Wildlife Trade Challenge Fund (300,000 LS project, with the specialized NGO Wara leader), UNDP (2 million euro project).

Potential additional grants have been secured for next year with the Zürcher Tierschutz (Switzerland), Leipzig Zoo (Germany) and private donors. In addition, the Programme has a remaining equity capital of USD 79,907 (TBC funds) at its disposal.

The Bafing-Falémé project of the United Nations Development Programme (UNDP) was supposed to start in 08/2019 but has not yet taken place. It is expected to support some important actions of the MBNP, including infrastructure and ecotourism.

In addition, the US Fish and Wildlife Service's Great Ape Conservation Fund (GACF) grant for the period between September 2018 and September 2019 has been added. There is also the Darwin Initiative grant that WCF received for three years and which is still active, mainly in the framework of the first support activities in our 7 pilot villages. (Table 6)

For the new school year and the realization of the club PAN, new funds have been granted by the Columbus Zoo (12'559 USD).

**Table 6.** List of donors and expenditures in 2019

Donor	Expenditures in 2019	Management Fees
GAC/CBG A2	1 979 872.73 USD	237 584.73 USD
DARWIN 2	30 425.00 GBP	3 043.00 GBP
DARWIN 3	29 972.72 GBP	2 997.52 GBP
GACF	435 919.69 USD	19 593.95 USD
ZOO LEIPZIG	10 714.28 EUR	1 275.51 EUR
COLOMBUS ZOO	13 369.31 EUR	1 604.46 EUR

### 3. Technical productions

#### 3.1 Environmental Strategy

##### Biomonitoring of NMBP wildlife with a focus on chimpanzees (PA – R3A.A1)

❖ **Objective: To monitor the evolution of indicator animal populations in the MBNP**

❖ **Results:**

The new trap camera method allows an estimation of animal population abundances with better accuracy than line transects (Capelle et al., 2019). Overall, camera trapping detected 44 species of wild mammals, including nocturnal and stealthy species that had not been confirmed for the area. Interestingly, our videos showed the presence of the lion in the PNMB area, a species considered "possibly extinct" in Guinea by the IUCN (Bauer et al., 2016). The first estimates for the Distance Sampling (DS) method with part of the data from the North-West is available. Thus, the first estimate of harnessed Guib (Tragelaphus scriptus) in Guinea for the 2004 km<sup>2</sup> sampled gives a density of 0.78 individuals/km<sup>2</sup>. For chimpanzees, it is difficult with the

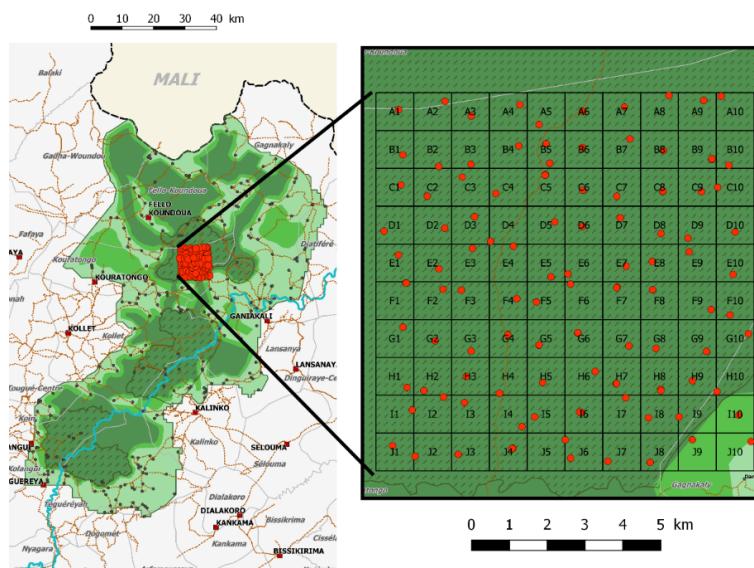
northwestern (unstratified) data to obtain an accurate estimate. In the classified Bakoun Forest, where an accurate count is being undertaken by reconnaissance of individuals, 54 adult males have now been identified, as well as 47 adult females.

### Spatially explicit capture-recapture method (SECR)

#### Data Collection Protocol

##### Bakoun area in the North of the MBNP

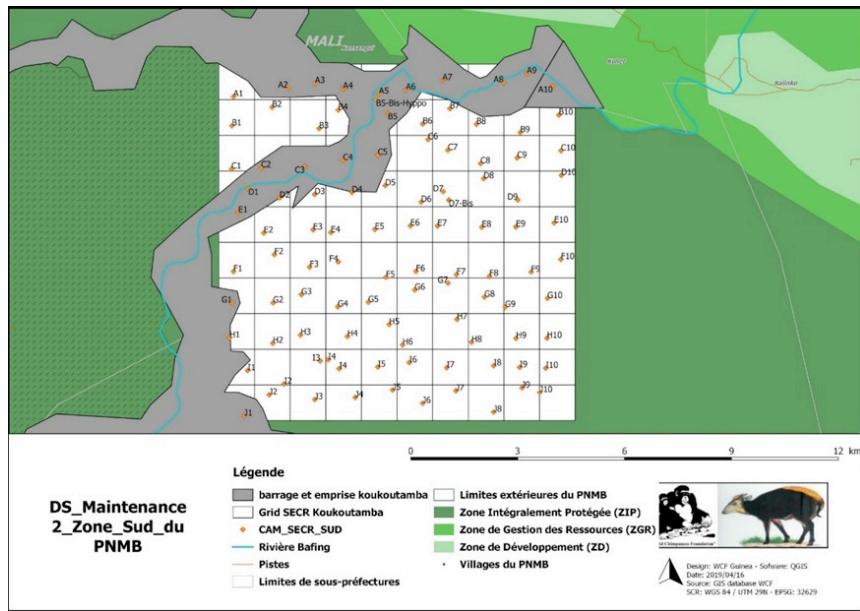
A study area of 100 km<sup>2</sup> was delineated in the classified Bakoun forest for the estimation of chimpanzee numbers by capture-recapture. This 100 km<sup>2</sup> area was divided into 1 km<sup>2</sup> cells. In each cell, a camera was placed opportunistically, i.e., to increase the probability of chimpanzee capture by trap cameras (Figure 6). Cameras remained in place from the end of February 2018 until mid-January 2019, for a total of just over 10 months. They were visited every 4 to 8 weeks and 85,440 videos were obtained by this method.



**Figure 6.** Location of the study area for the Capture-Recapture Protocol (SECR) in the classified forest of Bakoun in the NMBP (left) and details of the location of the 100 trap cameras in the 100 cells of 1 km<sup>2</sup>

#### Koukoutamba Zone in the South of the MBNP

The recapture grid was moved to the Koukoutamba area (Figure 7) in February 2019 in order to refine chimpanzee estimates in this important area affected by the proposed dam construction project. This grid would quantify the impacts due to the reduction of their territory and the likely displacement of neighbouring communities to the territory of other chimpanzees, resulting in conflicts between communities. It should be noted that two new mammal species were captured by these camera traps near the Bafing River, the hippopotamus and the aardvark.



**Figure 7.** Location of the study area for the Capture-Recapture Protocol (SECR) in the Koukoutamba region and the classified forest of Bani in the PNMB with details of the location of the 100 trap cameras in the 100 cells of 1km<sup>2</sup>

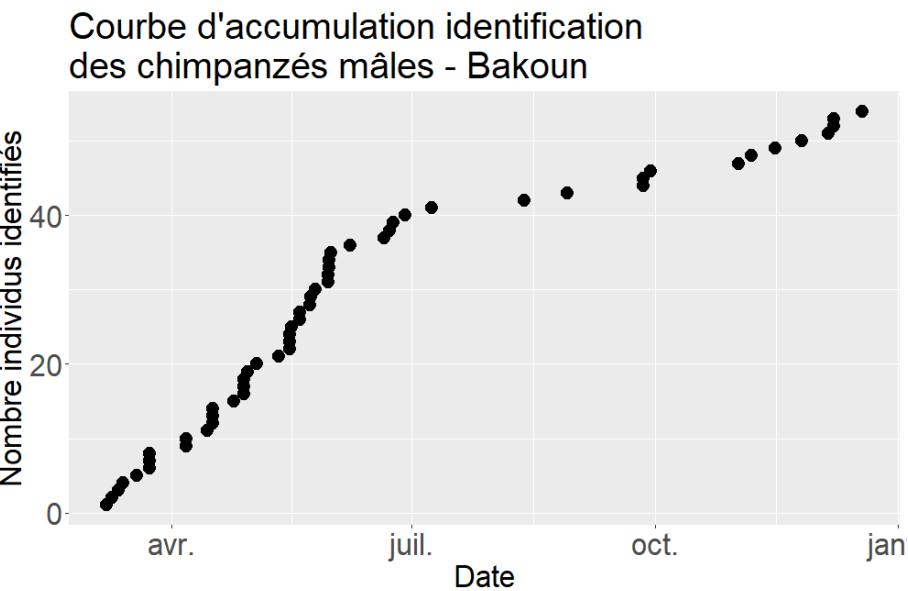
#### Chimpanzee density calculation by capture-recapture

The Capture-Recapture method (SECR) is based on the identification of individuals of a given species and in theory allows for 100% knowledge of the population present in the area. However, individual recognition requires a species with sufficiently clear characters to reliably distinguish individuals from an unknown population. This is typically possible with chimpanzees. Over the entire data collection period, 2,041 chimpanzee videos were collected. All chimpanzee videos were viewed in detail.

Of these videos, 54 adult males were identified. Identification is validated if an individual is recognized as the same individual on two videos belonging to different sequences, called events. An event is defined as a set of videos taken at the same location less than 15 minutes apart. This identification is also being validated by complementary methods.

Figure 8 shows the accumulation curve of the identified males. It allows us to estimate the extent to which the number of individuals recognized is close to the total number, the curve should reach a horizontal plateau showing that new individuals are no longer being found. It can be noted that from July onwards, the curve becomes less steep and therefore fewer new individuals are identified after the first five months of data collection. Nevertheless, the curve has not yet stabilized at a plateau, since new individuals were still identified in January, the month of the last data collection. However, the use of the capture-recapture model will allow us to estimate the number of unidentified chimpanzees present.

For adult females, the same work has been done. Currently, 47 adult females have been identified. As above, the curve also tends to reach a lower slope from July onwards (Figure 9).



**Figure 8.** Accumulation curve of the identification of adult males in the SECR zone of the Bakoun forest in the North of the NMBP. On the x-axis, the precise date when a new identification could be made

### Chimpanzee Social Structure and Population Growth

Proportion of chimpanzees carried by their mothers (Number of adult females carrying a baby / Total number of adult females)

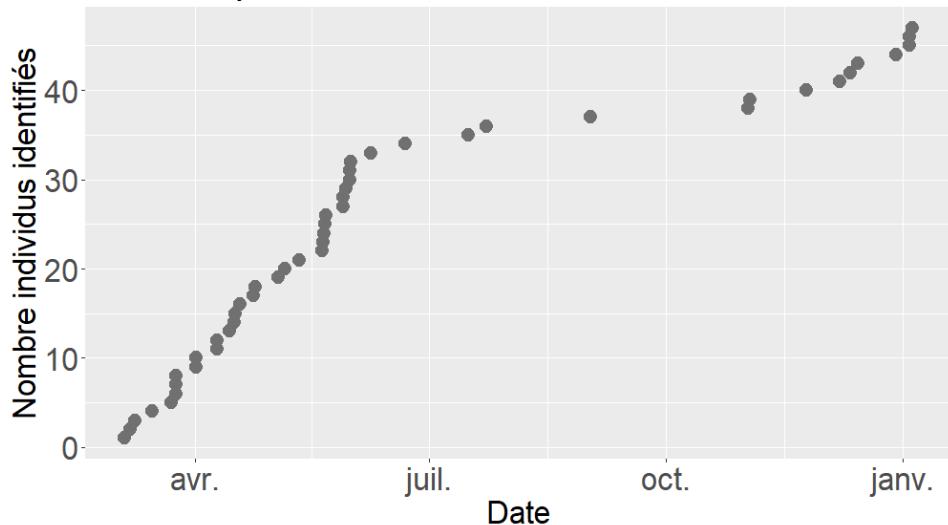
A total of 627 adult female chimpanzees were seen on the videos, of which 337 were carrying a child, bringing the proportion of the number of adult females with a small child to the number of adult females" to 0.54 for the period late February - late September 2018, in the SECR protocol area of the Bakoun Forest.

### Proportion of age groups and sex in the parties

In order to determine the age-class structure of the population, one must:

- Analyze the number and composition of the largest "subgroup" to appear on the cameras (considering that two separate videos of less than 15 minutes each are part of the same event, and considering only events of more than one hour interval so as not to take into account the return of the same subgroup to the same location).
- Calculate the number of individuals for each age group and sex appearing together in the same event and then compile the maximum number of distinct individuals seen in each category as a proxy for the total composition of the group.

## Courbe d'accumulation identification des chimpanzés femelles - Bakoun



**Figure 9.** Accumulation curve of the identification of adult females. On the abscissa, the precise date when a new identification could be made

In a paper published in 2018, McCarthy showed in Tai, Côte d'Ivoire, that the subgroup compositions captured by the cameras were consistent with the age-class proportions of the true group composition (McCarthy et al., 2018). Figure 10 shows these proportions for the Bakoun Forest population.

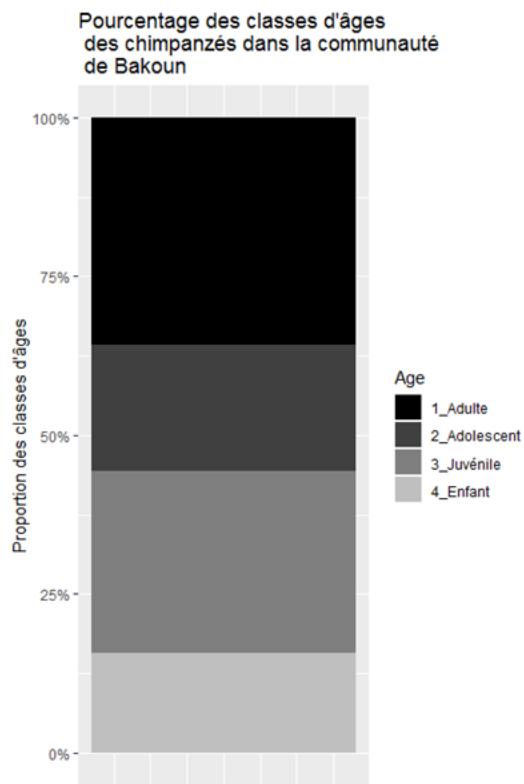
The chimpanzee community in the Bakoun Forest area appears to be composed of approximately two-thirds subadults, juveniles, and children with the largest juvenile class (Figure 11). It should be noted that children one year old or younger are carried primarily ventrally by their mothers, which makes them more difficult to detect and therefore the class of children may be somewhat underestimated.

### Distance sampling method using camera traps (DS)

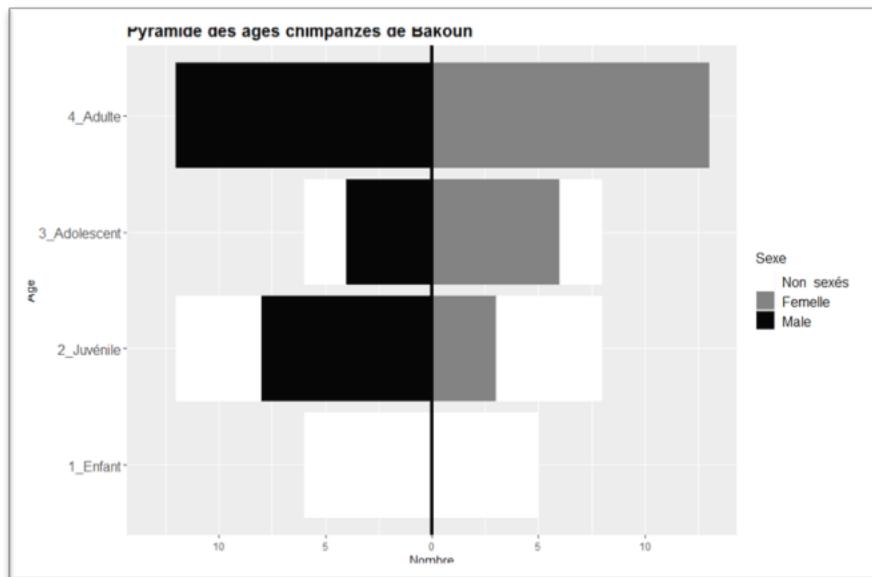
#### Design

Northwest sector of the MBNP

Following our 2018 annual report, the three installation missions and two maintenance missions resulted in 147,647 videos collected from February 27 to July 11, 2018. Of these videos, 11,954 are not empty, and only 8% show an animal. The list of animal species is presented with the associated capture rate (Table 7).



**Figure 10.** Percentage of age classes in the chimpanzee community sampled in the Bakoun Forest by the SECR design. 36% of individuals are adults, suggesting a rather growing population.



**Figure 11.** Age pyramid (right) for Bakoun chimpanzees (SECR design) by studying the size and sex of chimpanzees captured by the cameras. The numbers of individuals in each age and sex class were calculated by taking the maximum number of different individuals in each age and sex class seen in the sequences

**Table 7.** List of mammals and catch rates for the DS design in the North-West, the SECR design in Bakoun; highlighted in orange are the indicator species of the 2018-2020 Action Plan for our theory of change test

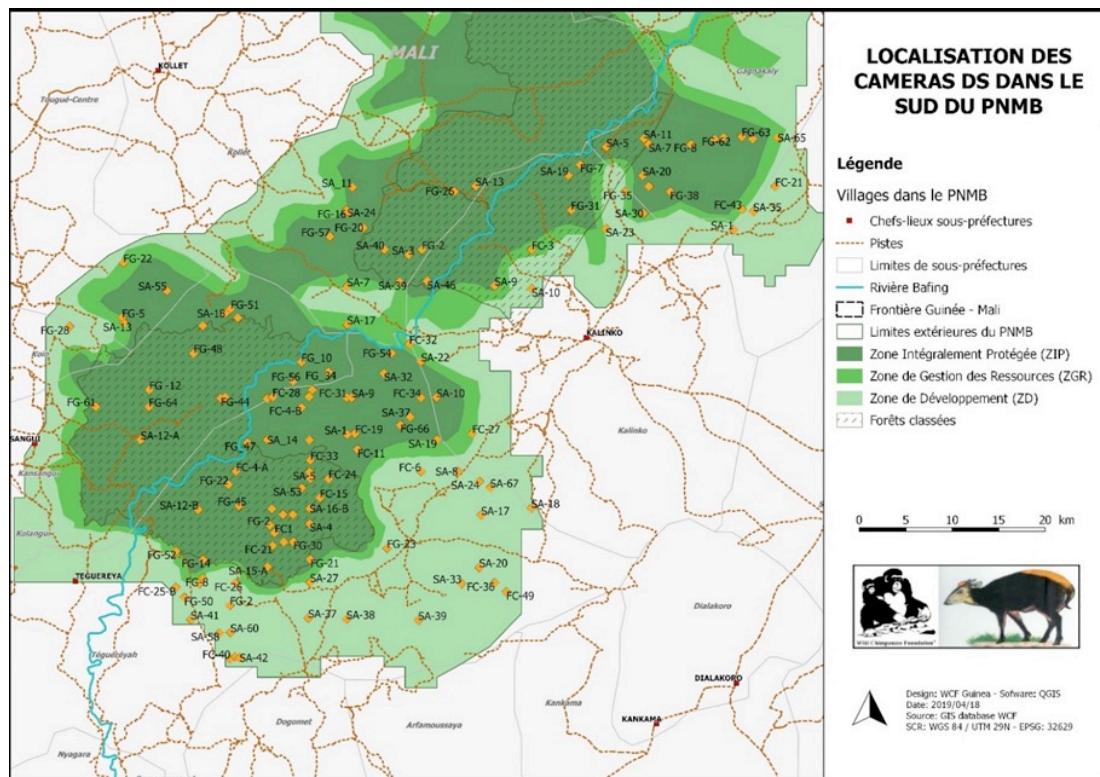
Espèces de mammifères	DS Nord-Ouest (avril-juin 2018)		DS Sud (décembre 2018- décembre 2019)		SECR Bakoun (mars 2018-janvier 2019)		SECR Koukoutmba (mars 2019- février 2020)	
	Nombre événements	Taux de capture (%)	Nombre événements (déc 2018- début avril 2019)	Taux de capture (%) (déc 2018- début avril 2019)	Nombre événements (mars 2018- mai 2018)	Taux de capture (%) (mars 2018- mai 2018)	Nombre événements (mars -avril- mai 2019)	Taux de capture (%) (mars -avril- mai 2019)
Primates								
(1) <i>Pan troglodytes verus</i>	72	1.11	258	3.18	273	8.94	171	7.3
(2) <i>Papio papio</i>	915	14.12	411	5.06	545	17.84	345	14.72
(3) <i>Erythrocebus patas</i>	383	5.91	95	1.17	16	0.52	18	0.77
(4) <i>Chlorocebus sabaeus</i>	390	6.02	448	5.52	201	6.58	101	4.31
(5) <i>Cercopithecus campbelli</i>	0	0	0	0	0	0	0	0
(6) <i>Colobus polykomos</i>	1	0.02	2	0.02	4	0.13	0	0
(7) <i>Galago senegalensis</i>	21	0.32	33	0.41	0	0	0	0
Rongeurs								
(8) <i>Hystrix cristata</i>	19	0.29	37	0.46	84	2.75	27	1.15
(9) <i>Cricetomys gambianus</i>	236	3.64	444	5.47	240	7.86	74	3.16
(10) <i>Funisciurus pyrropus</i>	82	1.27	124	1.53	56	1.83	49	2.09
(11) <i>Heliosciurus gambianus</i>	101	1.56	61	0.75	6	0.2	1	0.04
(12) <i>Xerus erythropus</i>	1	0.02	0	0	0	0	0	0
(13) <i>Thryonomys swinderianus</i>	17	0.26	12	0.15	0	0	4	0.17
(14) <i>Atherurus africanus</i>	3	0.05	77	0.95	27	0.88	88	3.75
Lagomorphes								
(15) <i>Lepus saxatilis</i>	59	0.91	35	0.43	0	0	2	0.09
Artiodactyles								
(16) <i>Phacochoerus africanus</i>	623	9.62	243	2.99	238	7.79	73	3.11
(17) <i>Cephalophus silvicultor</i>	8	0.12	1	0.01	22	0.72	0	0
(18) <i>Potamochoerus porcus</i>	2	0.03	30	0.37	22	0.72	15	0.64
(19) <i>Tragelaphus scriptus</i>	136	2.1	168	2.07	40	1.31	43	1.83
(20) <i>Cephalophus rufilatus</i>	151	2.33	182	2.24	26	0.85	40	1.71
(21) <i>Syncerus caffer nanus</i>	3	0.05	0	0	1	0.03	0	0
(22) <i>Philantomba maxwellii</i>	1	0.02	27	0.33	36	1.18	14	0.6
(23) <i>Kobus ellipsiprymnus defassa</i>	3	0.05	7	0.09	0	0	0	0
Carnivores								
(24) <i>Panthera pardus</i>	1	0.02	17	0.21	13	0.43	6	0.26
(25) <i>Mungos mungo</i>	30	0.46	46	0.57	5	0.16	8	0.34
(26) <i>Herpestes sanguineus</i>	73	1.13	72	0.89	40	1.31	31	1.32
(27) <i>Genetta genetta</i>	121	1.87	333	4.1	22	0.72	28	1.19
(28) <i>Mungos gambianus</i>	48	0.74	41	0.51	7	0.23	3	0.13
(29) <i>Canis adustus</i>	186	2.87	23	0.28	2	0.07	5	0.21
(30) <i>Civettictis civetta</i>	101	1.56	180	2.22	15	0.49	24	1.02
(31) <i>Genetta tigrina</i>	289	4.46	53	0.65	78	2.55	74	3.16
(32) <i>Ichneumia albicauda</i>	175	2.7	192	2.37	27	0.88	9	0.38
(33) <i>Nandinia binotata</i>	33	0.51	38	0.47	7	0.23	8	0.34
(34) <i>Mellivora capensis</i>	12	0.19	12	0.15	5	0.16	7	0.3
(35) <i>Leptailurus serval</i>	6	0.09	8	0.1	0	0	1	0.04
(36) <i>Caracal caracal</i>	5	0.08	2	0.02	5	0.16	4	0.17
(37) <i>Caracal aurata</i>	0	0	3	0.04	0	0	0	0
(38) <i>Herpestes ichneumon</i>	4	0.06	2	0.02	0	0	31	1.32
(39) <i>Atilax paludinosus</i>	89	0.36	128	1.58	72	2.36	57	2.43
(40) <i>Panthera leo*</i>	0	0	0	0	0	0	0	0
Damans								
(41) <i>Procavia capensis ruficeps</i>	1	0.02	0	0	12	0.39	0	0
Hippopotamidae								
(42) <i>Hippopotamus amphibius</i>	0	0	1	Video unique en juin	0	0	7	0.3
Manidae								
(43) <i>Smutsia gigantea</i>	0	0	1	Video unique en mai	0	0	0	0
Orycteropodidae								
(44) <i>Orycteropus afer</i>	0	0	0	0	0	0	1	0.04
Animaux domestiques								
<i>Homo sapiens</i>	57	0.88	124	1.54	9	0.29	32	1.37
<i>Bos Taurus</i>	295	4.55	1397	17.21	51	1.67	94	4.01

The most captured indicator species of the 2018-2020 Action Plan are baboons (*Papio papio*) and warthogs (*Phacochoerus africanus*) observed throughout the diversity of habitats in Middle Bafing. Similarly for vervet (*Chlorocebus sabaeus*) and harnessed guibis (*Tragelaphus scriptus*) but in smaller numbers. On the other hand, red-sided duikers (*Cephalophus rufilatus*) were not captured in grassy savannah, and chimpanzees (*Pan troglodytes verus*) were poorly captured, and only in open forests, gallery forests, shrubby savannah and bamboo forests.

The proportion of habitats sampled by the DS method cameras respects the proportion of known habitats in the park, but is problematic due to the forest preference of many species including chimpanzees. The random and systematic placement of trap cameras results in a majority of cameras in the PNMB being placed in shrubby savannah and open forests, with only 2% of the cameras in gallery forests, which is the preferred habitat of chimpanzees. This explains why we have adapted our camera placement method for phase 2 of the DS method.

#### Southern sector of the MBNP

For phase 2, the cameras were moved to the south end of the park. The proportion of habitats sampled by the DS protocol depends on the use of these habitats by the target species. Thus, the cameras were again placed systematically, but with stratification by habitat (Figure 12). This stratification favoured forest habitats preferred by chimpanzees and many other species.



**Figure 12.** Location of cameras for the DS method in the south of the park following a randomly stratified design based on forest class strata used preferentially by chimpanzees in the MBNP

Thus, an estimate of the species of interest for the project will be possible in each habitat. This will make it possible to have enough videos of species in a certain type of habitat that are not the most represented in the park, such as chimpanzees. No cameras have been placed in grassy savannah, as the species using grassy and shrubby savannah are similar. Distance analyses will be conducted separately according to habitat.

Viewing of these videos is ongoing. Of the 280,677 videos viewed (from December 2018 to August 2019), more than 40,540 videos were with animals (14%). This represents an improvement in the capture rate compared to the first phase with a fully systematic protocol (8% non-empty) especially for chimpanzees. We thus have 884 chimpanzee events. The stratification which was intended to have more chimpanzee videos proves its value here.

While viewing the videos, a new, previously uncaptured species was seen, the African golden cat (*Caracal aurata*) (Figure 13).



**Figure 13.** Screenshot of the first video confirming the presence of the golden cat (*Caracal aurata*) in the MBNP

### Extracting distances from phase 1 videos

For density and abundance calculations of animal species, it is essential to know the surface area of the area surveyed, to do this we need to know the distance of the animals captured on video (Buckland et al. 2011). The extraction of distances for indicator species from videos of the DS method in the northwestern part of the park was complete for the period from 27 February to 11 July for 4 out of 6 of our indicator species in the 2018-2020 Action Plan (Table 8). Thus, a first estimate of the density of harnessed Guibs in Guinea in an area of 2,000 km<sup>2</sup> could be obtained. The method estimates the density at 0.78 individuals per km<sup>2</sup>, with a coefficient of variation of 27.7%. Quantified inventories of this species are rare, but the latest estimates provided to IUCN describe low to moderately abundant populations with an average density of 0.1 individuals per km<sup>2</sup>, which appears to be a significant underestimate. Being a species hunted by local communities (evidence found during maintenance missions for the cameras), the harnessed Guib is not in high density in the area.

**Table 8.** Preliminary abundance estimates for 4 out of 6 of our 2018-2020 Action Plan indicator species in the north-western part of the MBNP

Indicator species	Density (Individuals/km <sup>2</sup> )	CV (%)	Confidence interval
<i>Pan troglodytes verus</i> *	0,59	40,6	0,22 – 1,12
<i>Tragelaphus scriptus</i>	0,78	27,7	0,40 – 1,24
<i>Cephalophus rufilatus</i>	0,77	30,2	0,45 – 1,38
<i>Phacochoerus africanus</i>	En cours	En cours	En cours
<i>Papio papio</i>	X	X	X
<i>Chlorocebus sabaeus</i>	2,43	22,0	1,50 – 3,62

\*Due to camera traps in the Northwest NMBP, following a systematic sampling protocol, collected only a small number of images of chimpanzees, density estimates are imprecise, with a large confidence interval and CV

For chimpanzees, with the non-stratified design, estimation is tricky due to the small number of images, which makes it difficult to estimate the availability of chimpanzees to be captured by the camera (i.e., the estimate of active time spent on the ground by chimpanzees).

However, estimation by the method of Rowcliffe et al. (2014) as done for harnessed guibis is based on assumptions of a 100% terrestrial species that are not verified for a semi-terrestrial species such as chimpanzees. Estimation using the method of Cappelle et al. (2019) gives an estimate of chimpanzee activity on the ground in Tai Forest of 40% of the day. For chimpanzees living in a mosaic of habitats, values of about 20% have been proposed at Fongoli in burned areas (Pruett & Herzog, 2017), just over 30% at Mahale (Matsumoto-Oda, 2002) for the dry season or 36% at Mount Assirik (Tutin et al., 1983). The results presented are those with 40% camera availability. With our new protocol for the southern NMBP, an exact measurement of camera availability will be possible.

A compilation of all the data allows us to make a first list of mammal species confirmed in the NMBP by the trap cameras (Table 7, Figure 14).

The development of an automated method of video analysis carried out with the Max Planck Institute for Evolutionary Anthropology and DrivenData ([www.drivendata.org](http://www.drivendata.org)) has made significant progress that now allows us to upload videos to the DrivenData Cloud in large numbers (5000 videos), and then filter empty videos with an accuracy of more than 90%. Videos labeled as non-empty by Zamba are then watched by video analysts in order to refine the recognition of the species present (Zamba classifies the animals into 18 categories) (<https://zamba.drivendata.org>).

The adaptation of the distance sampling method for phase 2 in the southern part of the Park, with a stratified habitat design, shows its relevance compared to phase 1 (72 events), with a large number of chimpanzees captured (884 events). This should allow us to produce a much more accurate first estimate than the line-transect method on the indicator species selected in the 2018-2020 Action Plan. The comparison between phases 1 and 2 should also give us a better understanding of the distribution of animal species throughout the park.



**Figure 14.** Some results recorded from the cameras, aardvark (*Orycteropus afer*), hippopotamus (*Hippopotamus amphibius*), chimpanzees (*Pan troglodytes verus*), giant pangolin (*Smutsia gigantea*)

Positive developments in the automation of analyses allow us to foresee an improvement in the speed of processing the very numerous videos provided by this program. Thus, in the long term, offering the possibility of more effective monitoring of indicator species populations and their variations over time. The new protocol applied in the southern zone of the NMBP is proving to be adequate for our monitoring objectives and will thus be retained for the 3rd phase of the Northeast NMBP. This should enable us to produce a first estimate that is much more accurate than the line transect method on the indicator species selected in the 2018-2020 Action Plan.

Moving the cameras to the last third of the park (Northeast) is planned for the first quarter of 2020. The automation for sorting videos with the DrivenData group, the Zamba platform, is in the final stages of improvement, and should reach the set objectives of 10% false negatives (called not empty when empty) by mid-September, allowing us to concentrate on finer coding of the videos. For the moment, the first problem of limiting the number of videos to upload on the platform, and partial data recovery is solved (about 24 hours for Zamba to process 5000 videos, producing a file with 5000 lines, one per video). Different methods have been tested for learning how to sort videos, and the selected method, based on background extraction, allows a match of more than 86% for empty/non-empty sorts. However, the method doubles the time it takes Zamba to give a result. The DrivenData group has put the new algorithm on their online platform. The test of 5000 videos was conclusive, even if a work on the stability of Zamba still needs to be done by Driven Data (some downloads still fail).

By coupling Zamba, and a verification of the tags by a team of analysts, we hope to catch up on the delay in viewing the videos.

#### MBNP Floristic Inventory (PA - R3B.A1)

Collaboration with the Royal Botanical Garden of Kew and the National Herbarium of Guinea has been developed to conduct botanical surveys in the Moyen-Bafing National Park. The main objectives are to provide: 1) a list of all plant species present in the main habitats; 2) and to identify some threatened species.

The future Middle Bafing National Park (MBNP) has 281 plant species, 19 of which are endangered species present to date in the different types of vegetation. It is the only known location for two globally endemic species (*Barleria asterotricha* and *Dissotis linearis*) and home to a large population of the globally threatened species *Lipotriches felicis*, *Cyathula pobeguinii*, *Macropodiella garrettii*, *Danthoniopsis chevalieri*, and *Leocus pobeguinii* - the PNMB has the only recent records of these. Four potential new species were identified in 2018, and three additional species were identified for the first time in Guinea. (Table 9)

It also appears that gallery forest, as a habitat, does not exist in large quantities. There are pieces on the banks of large rivers but it is not continuous and also in small valleys. Regularly flooded areas are characterized by *Pandanus candelabrum*, *Raphia sudanica* and *Uapaca heudelotii*. Most of the vegetation along the rivers is not species associated with gallery forests, it is a mixture of open forest species with some riverine species.

The bowé have been studied in depth including the micro-habitats found. The diversity is not the same as in the high elevation areas towards Dalaba, but we recorded 72 species including *Mesanthemum tuberosum* VU and *Cyathula pobeguinii* VU. Wetlands have a higher diversity with herbaceous species in the families *Lentibulariaceae*, *Eriocaulaceae* and *Cyperaceae*. In total 22 species of *Poaceae* are identified, but there are some species not identified due to their condition (e.g. bad parts for identification). The dominant species across the bowé is *Parahyparrhenia annua*.

These results enabled Charlotte Couch and Martin Cheek of RBG Kew to propose an assessment of Important Tropical Plant Areas (ITPAs) throughout the entire MBNP and more specifically the Koukoutamba waterfalls in the Tougué prefecture. These represent the richest *Podostemaceae* spp site in Guinea with five species. It is the only known site in Guinea for the critically endangered *Podostemaceae* spp, *Lebbiea grandifolia*, and the only known site worldwide for a new species *Inversodicraea koukoutamba* ined. These species are threatened and endangered because of the proposed hydroelectric dam construction project. In addition, *Stonesia taylorii*, globally endangered, is also threatened by this dam project.

With the results of this study, we have a better idea of the species and the threats to them in the NMBP. Indeed, the riparian population is important and shapes this landscape through its actions (e.g., clearing for fields, burning for hunting and grazing) that affect the resilience and diversity of vegetation.

In addition, the ESA study on the Koukoutamba dam identified 207 plant species. Five threatened species were identified. All are classified as vulnerable by IUCN. Five plant species classified as Vulnerable (VU) according to IUCN criteria were identified in the study site: *Milicia regia*, *Afzelia africana* and *Mitragyna stipulosa*.

**Table 9.** List of Threatened Flora Species (19 + 4 to be determined) in the NMBP (WCF et Kew, 2019) (EN-Endangered, CR - Critically endangered, VU - Vulnerable, NT - Near Threatened)

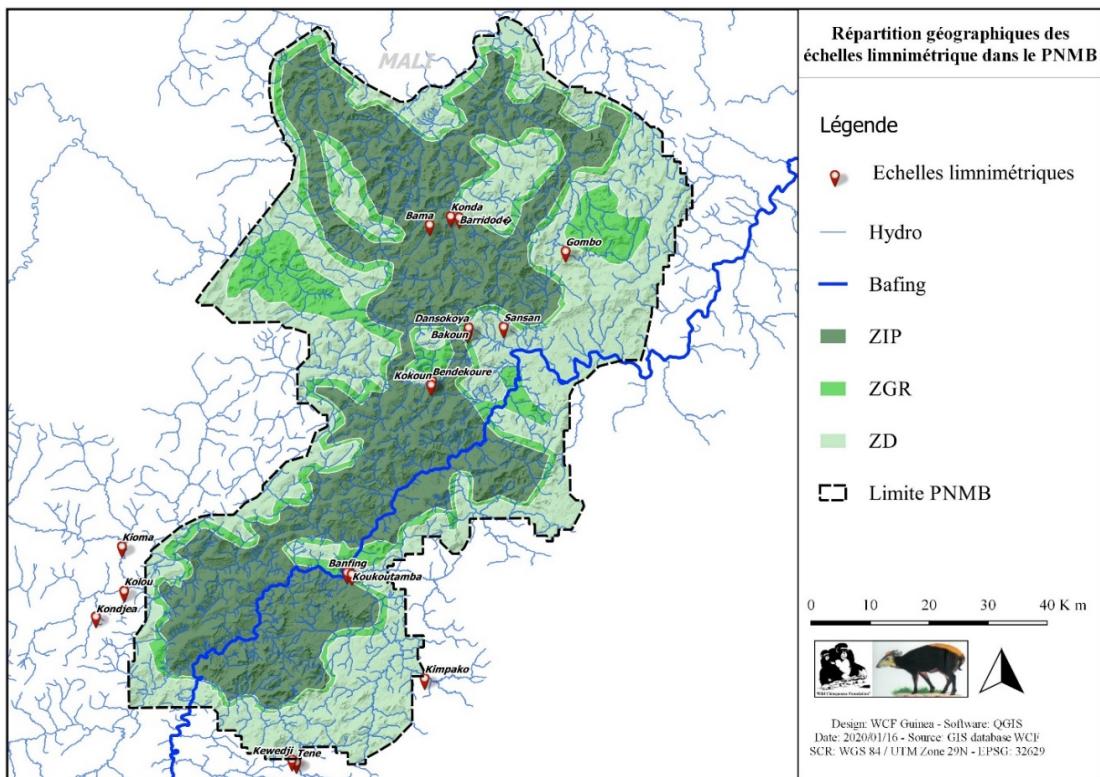
Family	Species	IUCN Status	Habitat
Acanthaceae	<i>Barleria asterotricha</i> Benoist	CR	Open woodlands
Acanthaceae	<i>Lepidagathis fimbriata</i> C.B. Clarke	NT	Bowé
Acanthaceae	<i>Lepidagathis pobeguinii</i> Hua	NT	Bowé
Acanthaceae	<i>Rungia eriostachya</i> Hua	NT	Ecotone between bowé and open woodland
Amaranthaceae	<i>Cyathula pobeguinii</i> Jacq.-Fél.	VU	Bowé
Asteraceae	<i>Lipotriches felicis</i> (C.D.Adams) D.J.N.Hind	EN	Ecotone between bowé and open woodland
Eriocaulaceae	<i>Mesanthemum tuberosum</i> Lecomte	VU	Bowé
Lamiaceae	<i>Leocus pobeguinii</i> (Hutch. & Dalziel) J.K.Morton	VU	Open woodland / scrub
Leguminosae-Caesalpinoideae	<i>Afzelia africana</i> Sm.	VU	Open woodlands
Legminosae-Papilionoideae	<i>Pterocarpus erinaceus</i>	EN	Open woodland / scrub
Malpighiaceae	<i>Acridocarpus spectabilis</i> (Nied.) Doorn-Hoekm.	VU	Scrub savanna
Melastomataceae	<i>Dissotis (Argyrella) linearis</i> (Jacq.-Fél.) Veranso-Libalah & G.Kadereit	EN	Scrub savanna/ swamp
Meliaceae	<i>Khaya senegalensis</i> A.Juss.	VU	Open woodland/ Gallery forest
Poaceae	<i>Danthoniopsis chevalieri</i> A.Camus & C.E.Hubb.	VU	Bowé/ savannas
Primulaceae	<i>Embelia djalonensis</i> A.Chev. ex Hutch. & Dalziel	VU	Gallery forest
Podostemaceae	<i>Inversodicraea koukoutamba</i> Cheek ined.	CR	Waterfalls
Podostemaceae	<i>Stonesia taylorii</i> C.Cusset	EN	Waterfalls
Podostemaceae	<i>Inversodicraea harrisi</i> (C.Cusset) Cheek	VU	Waterfalls
Podostemaceae	<i>Lebbiea grandiflora</i> Cheek	EN	Waterfalls
Podostemaceae	<i>Macropodiella garrettii</i> (C. H. Wright) C. Cusset	EN	Waterfalls
Rubiaceae	<i>Pavetta lasioclada</i> (K.Krause) Mildbr. Ex. Bremek	VU	Gallery forest
Sapotaceae	<i>Vitellaria paradoxa</i> C.F. Gaertner	VU	Open woodlands

#### Monitoring of environmental parameters in the NMBP (R3C.A1)

In order to gain knowledge about river systems that will guide decision-makers in their decision-making, 17 scales have been installed on different rivers in the NMBP since 2018 (Figure 15). This first system will be reinforced by a new batch of 40 scales. In addition, the installation of the ladders covers the two major river systems of the park, namely: the Falémé in the northwest and the Bafing in the south and eastern flank.

River level monitoring is carried out daily by the service providers on 17 millimetre scales installed in different rivers of the PNMB, whose connection levels and catchment areas are presented in the table below (Table 10).

The results show that the water level declined similarly during the months of January, February, March, April, May and June (Figure 16). This corresponds exactly with the dry season period in the area. Thus, the maximum water level was observed during September



**Figure 15.** Geographical distribution of water-level scales in the MBNP

$200 \pm 138$  cm and  $31 \pm 19$  cm. However, there is a discrepancy showing a large variation in the data over the month. This would be attributed to the difference in tributary connections and the difference in the river system.

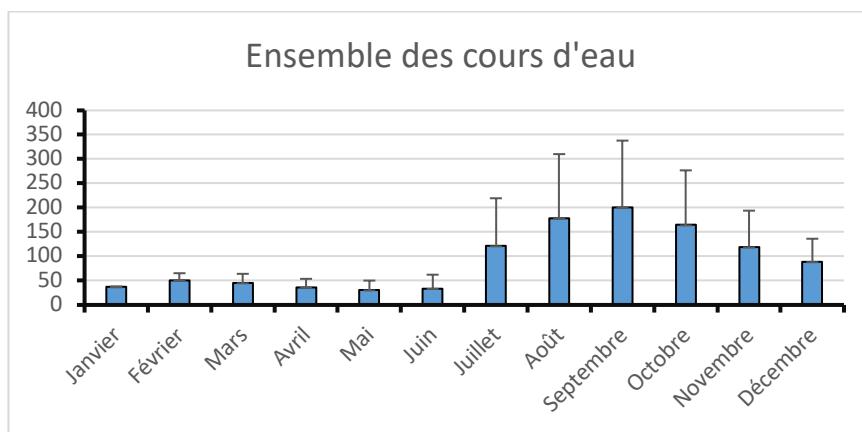
The Middle Bafing National Park is covered by 3 watersheds namely: the Gambia River and the two large tributaries of the Senegal River (the Bafing and the Falémé). Currently, the 17 scales are installed on the rivers connected to the hydrographic network of the Falémé and the Bafing. A comparison of the monthly water level of the two networks shows that the rivers connected to the Bafing have a clearly higher average water level than the Falémé (Figure 17).

The water level follows the order of importance of the tributaries faithfully. The Gombo and the Bafing (FS) have an average water level of maximum 306 cm in the month of September. While the tertiary tributaries only reach an average of 56 cm. Tributaries 1 and 2 have an average of 159 cm and 231 cm respectively during the same month. However, the ladders installed on the tributaries of Senegal (FS) began to function properly from April (Figure 18).

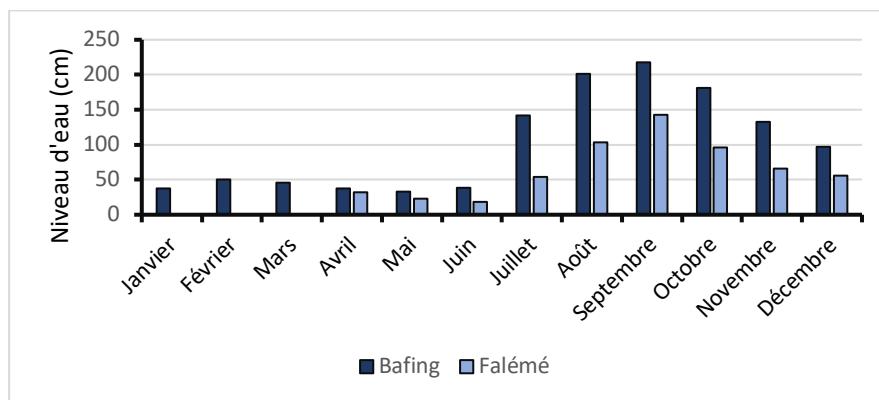
Rainfall and temperature data were recorded through 4 stations located in Ndire Yanguuya, Kokoun, Kalinko Konkero and Ley Kimbeli. However, the weather stations started operating in February. In addition, during 2019, the peak of rainfall was recorded in August with an average of 496 mm of water. At the same time, from the month of February the temperature reached about 46°C and dropped similarly in the month of December (10°C) (Figure 19).

**Table 10.** Distribution of water-level scales in the MBNP by stream and watershed

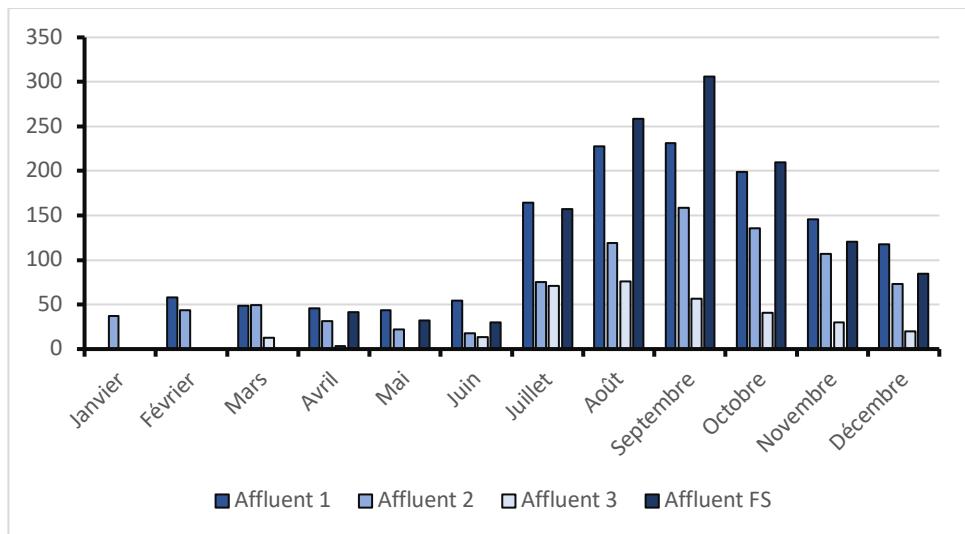
N°	River / tributary	Level	Watershed
1	<b>Bafing</b>	Affluent Sénégal	Bafing
2	Tene	Affluent 1	
3	Koukoutamba	Affluent 1	
4	Kimpako	Affluent 2	
5	Kewedji	Affluent 1	
6	Kioma	Affluent 1	
7	Koloun	Affluent 2	
8	Condjéa	Affluent 3	
9	Kokoun	Affluent 1	
10	Bendekouré	Affluent 2	
11	Bakoun	Affluent 1	
12	Dansokoya	Affluent 2	
13	Sansa	Affluent 2	
14	<b>Gombo</b>	Affluent Sénégal	Falémé
15	Baridondé	Affluent 1	
16	Bama	Affluent 2	
17	Koundé	Affluent 2	



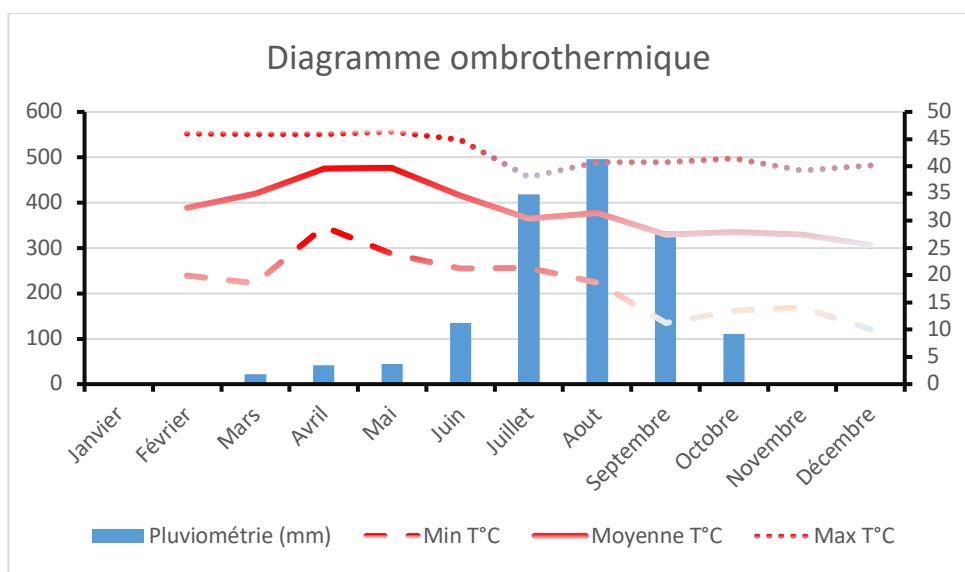
**Figure 16.** Water level according to month



**Figure 17.** Monthly water level of two networks: the streams connected to Bafing and Falémé rivers



**Figure 18.** Water levels in tributaries by month

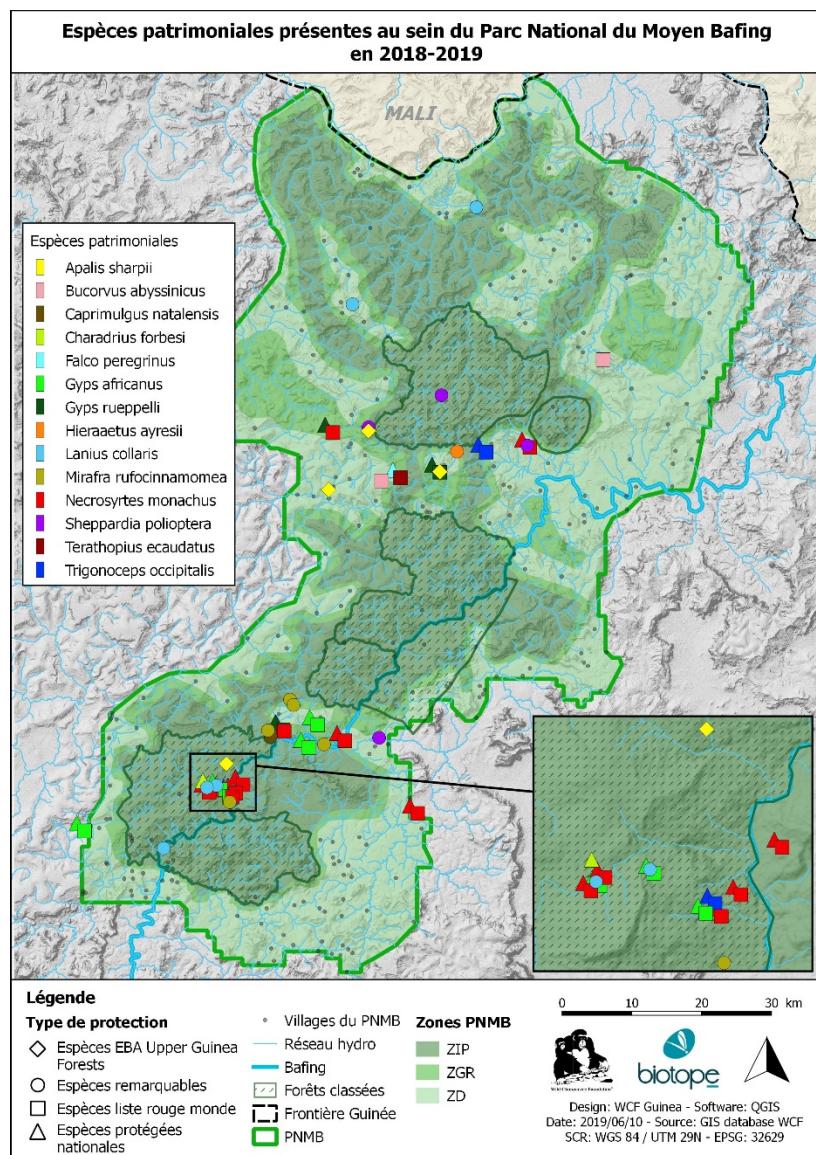


**Figure 19.** Rainfall and average temperature recorded by 4 metrological stations across the MBNP

### Bird monitoring in the MBNP (PA - R3D.A1)

The final report produced by the Biotope office was sent at the end of the second quarter of 2019.

203 bird species (28% of the known avifauna of Guinea) have been recorded in the Middle Bafing National Park. Six species are fully protected at the national level according to the new Wildlife Code: African Vulture, Griffon Vulture, White-headed Vulture, Rüppell's Vulture, Forbes Plover, Peregrine Falcon. In addition, some of the species listed are threatened on a global scale: these include the 4 identified species of Vulture, the Abyssinian Bucorva. Other species at the limit of their range, uncommon in West Africa or endemic to the biogeographical domain have also been identified: Gonolek de Turati, White-browed Cossyphé, Ayres Eagle, Buzzing Lark or Natal Nightjar. (Figure 20)



**Figure 20.** Map of the location of bird species observed in the MBNP

Develop specific inventory themes to increase knowledge of biodiversity in the NMBP (PA - R3D.A4)

A preliminary study on amphibians and reptiles has been identified, as well as hippopotamuses and lepidoptera. The search for expertise is under discussion. The wildlife aspects of the rivers are the subject of other specific studies detailed in the Action Plan 2018 - 2020 and a team of specialists has been identified in early 2020 to launch the studies on fisheries resources and the physico-chemical conditions of the rivers.

As such, and as mentioned in the Action Plan, ecosystem services are important and have been drafted in order to find adequate funding. These services represent the benefits offered to human societies by the park's ecosystems. The ecosystem assessment distinguishes four

categories of services: provisioning services, regulating services, supporting services, and cultural services.

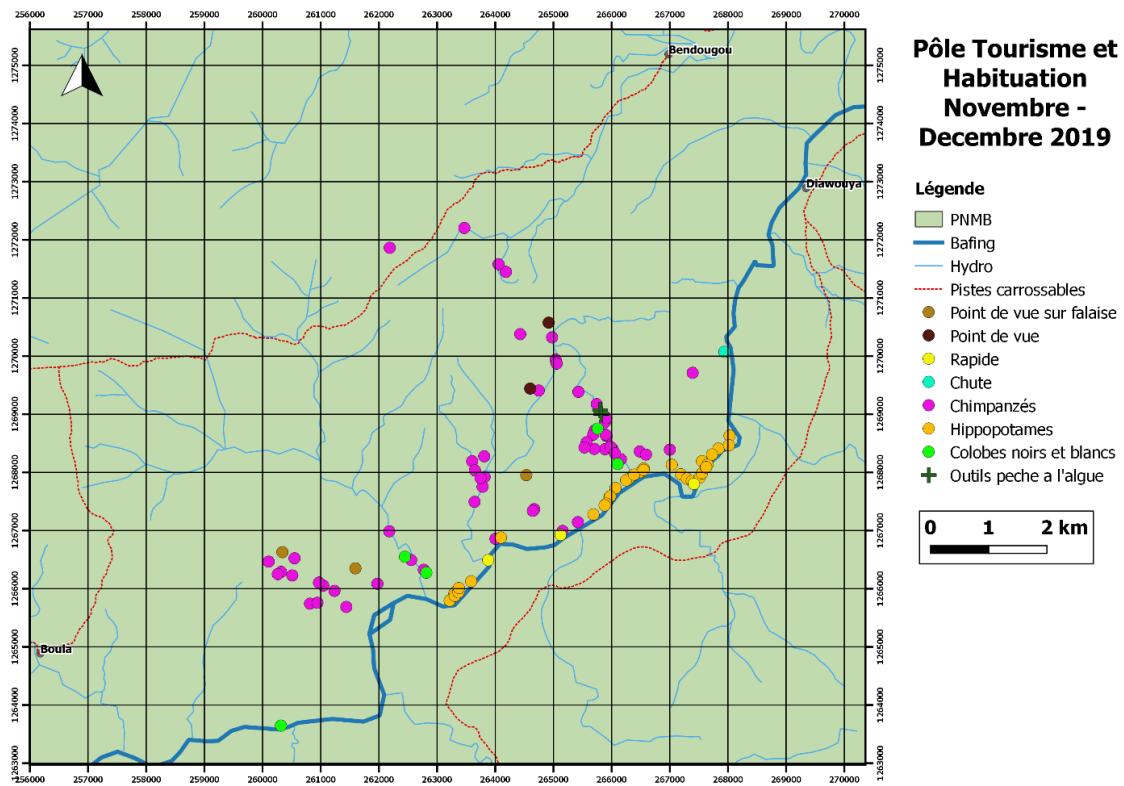
A team led by Doctoral student Anna Preis has been in charge since July of setting up a study on the habituation of chimpanzee groups, for research purposes but also for ecotourism activities.

Four missions were carried out for the pre-identification of tourist sites:

- Identification of an area with tourist potential in the classified forest of Boula, between Boula and Bendougou (September - October 2019);
- In this area, 3 cliffs with spectacular views of the Bafing River and the surrounding area were found, as well as 2 other spectacular viewpoints, 3 rapids and a magnificent waterfall (November - December 2019);
- Numerous signs of animals were found in this area, including chimpanzees, hippos, and black and white colobus (November - December 2019) (Table 11, Figure 21);
- In addition, chimpanzee seaweed fishing gear was found for the first time in this area, which reassures the tourism potential of this area, as a group of chimpanzees are planned to be habituated to human presence for ecotourism, which exhibit seaweed fishing behaviour (December 2019).

**Table 11.** Signs of animals found in the area preselected for tourism in November and December 2019

Species	Sign(s) detected	Number
<i>Chimpanzee</i>	Nest	228
<i>Chimpanzee</i>	Sign of feeding	9
<i>Chimpanzee</i>	Vocalisation	1
<i>Baboon</i>	Tracks /vocalisation	60
<i>Baboon</i>	Observation	7
<i>Vervet</i>	Observation	8
<i>Patas</i>	Observation	4
<i>Black-and-white colobus</i>	Observation	3
<i>Black-and-white colobus</i>	Vocalisation	3
<i>Warthog/Wild pig</i>	Tracks	80
<i>Hippopotamus</i>	Tracks	36
<i>Buffalo</i>	Tracks	4
<i>Duiker + Antilope</i>	Tracks	19
<i>Duiker</i>	Observation	1
<i>Unkown carnivore</i>	Tracks	4
<i>Chacal</i>	Observation	1
<i>Cobra</i>	Observation	2
<i>Python</i>	Observation	6



**Figure 21.** Signs of animals found in the area preselected for tourism, especially near the Bafing River, in November and December 2019

#### Conduct a study on the social and cultural dynamics of bushfires. (PA - R3D.A5)

As part of this study and in order to monitor the evolution of vegetation within the NBI, the WCF collected information on the burned areas and fires detected each month from 2008 to 2018 (Table 12), making it possible to determine the areas of the NBI most exposed to bush fires.

The distribution of the fire concentration points in the NBI area was studied through several maps, allowing to identify their monthly evolution and to define a temporal prioritization of actions. In addition, an analysis of the seasonality of fires in the NMBP was carried out, showing their intensity with the dry season (Figure 22) and a summary of the areas of the NMBP most likely to be burned (Figure 23).

A specific strategy has been finalized and was tested at the end of 2019. The implementation of this specific strategy requires broad community involvement and, therefore, we are anchoring these activities in the development of village committees, their union, and communal assemblies. OGPR and MEEF are also involved as well as our team of supervisors, facilitators, focal points, etc. directly in contact with the communities. Three levels of intervention have been identified and structure the organisational processes of the actors to be involved. (Table 13)

In November and December, WCF teams launched the first campaign against bushfires which included the establishment of firebreaks (protection of High Conservation Value Areas - HCV,

**Table 12.** Information analysed over 4 and 10 years of bush fire observations within the Middle Bafing National Park with NASA FIRMS (observation over the whole MNP and a buffer zone of 15km, i.e. 13,561.38km<sup>2</sup>)

Satellite	Number of fires detected	Number of years	Avg. number of fires year <sup>-1</sup>	Avg. number of fires (year-km <sup>2</sup> ) <sup>-1</sup>
VIIRS	66,948	4	16,737	1.23
MODIS	36,386	10	3,638.6	0.27

*Data source: NASA FIRMS*

*Data provided: active fires at the time of the satellite's passage (twice a day, between 13:00 and 15:00). Pixel detection accuracy of 375 m for VIIRS and 1 km for the MODIS sensor*

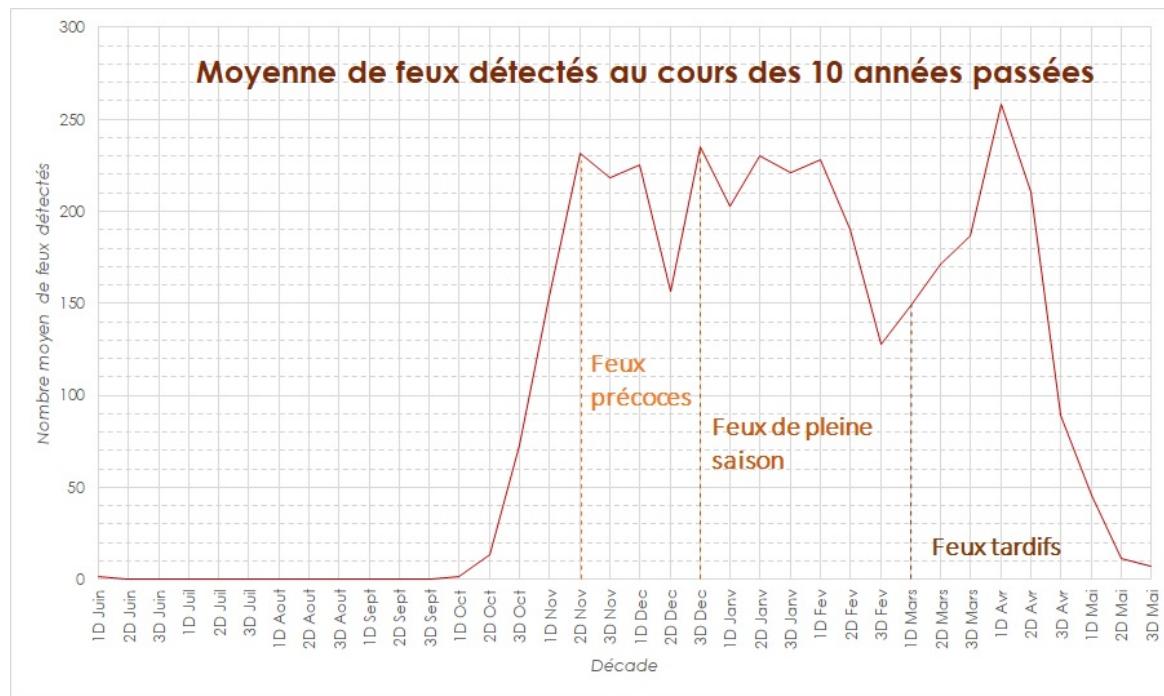
ENR/ENR and heads of major rivers) (Figure 24a), training of communities in the construction of firebreaks and early burning of savannah. Many jobs have been generated with these actions through the village committees. These are the HVCs in Dara, Kansangui, Ndire Yanguuya and Laffa Boubhé (Figure 24b).

By calculating the index, it is possible to monitor the burnt area in the park. For example, in November 2019, 14% of the park area was burned at the beginning of the fire season. A first analysis of this first early fire campaign allowed to compare the proportions of controlled and uncontrolled fires in the BMP (1st & 2nd fire mission from November 05 to December 16, 2019: sentinel image of 30/11/19). Two bush fire management missions were organized for early fire setting and establishment of firebreaks in 4 management zones (Table 14, Figure 25).

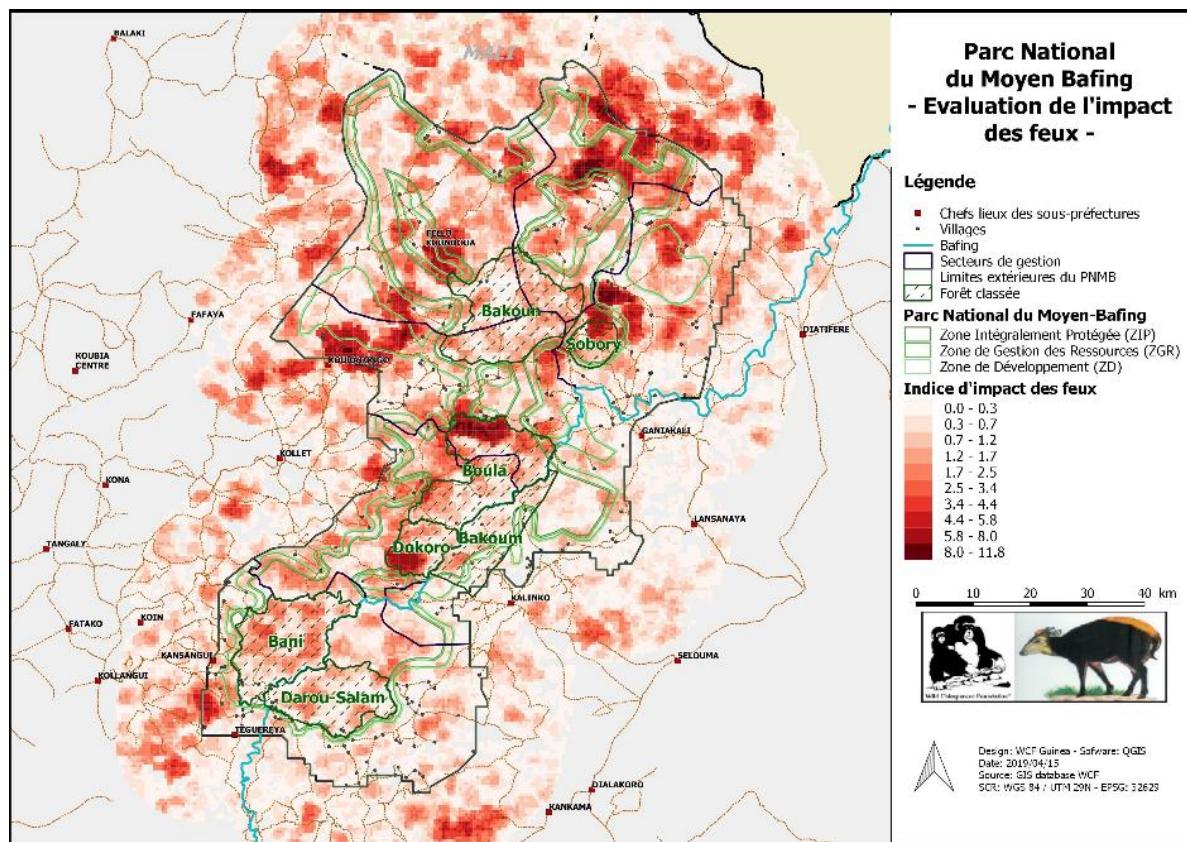
In the course of the first and second mission of the WCF fire management team, we recorded: 588 controlled fires (WCF team), i.e. 46,152.47 hectares and 541 uncontrolled fires, i.e. 45,603.38 hectares (NASA FIRMS: MODIS) within the NMBP perimeter (Figure 26). In addition, 16,603 ha of HCV area were protected by the establishment of firewalls more than 15 m wide. Natural firebreaks (hills, rivers and tracks) were also considered as firebreaks. Figure 27 shows the area of the park burned between November - December 2019.

The presence of a sociologist (Dr. Tina Tra) in the project team was confirmed in order to launch a sociological study of the burning of natural resources present in the community territories. The collection of data in the localities of Dakaciré, Kalinko Konkero, Douroun-Misside, Balabory, Yalagueta, Kokoun and Boussouria on the practice of fire in the PNMB has been launched (Table 15). Collaboration is being explored with the INSUCO firm to support this study.

A survey was conducted to understand the socio-cultural proponents of the practice of fire in the NMBP. A report is available. The study allowed the development of a fire calendar in the NIP.



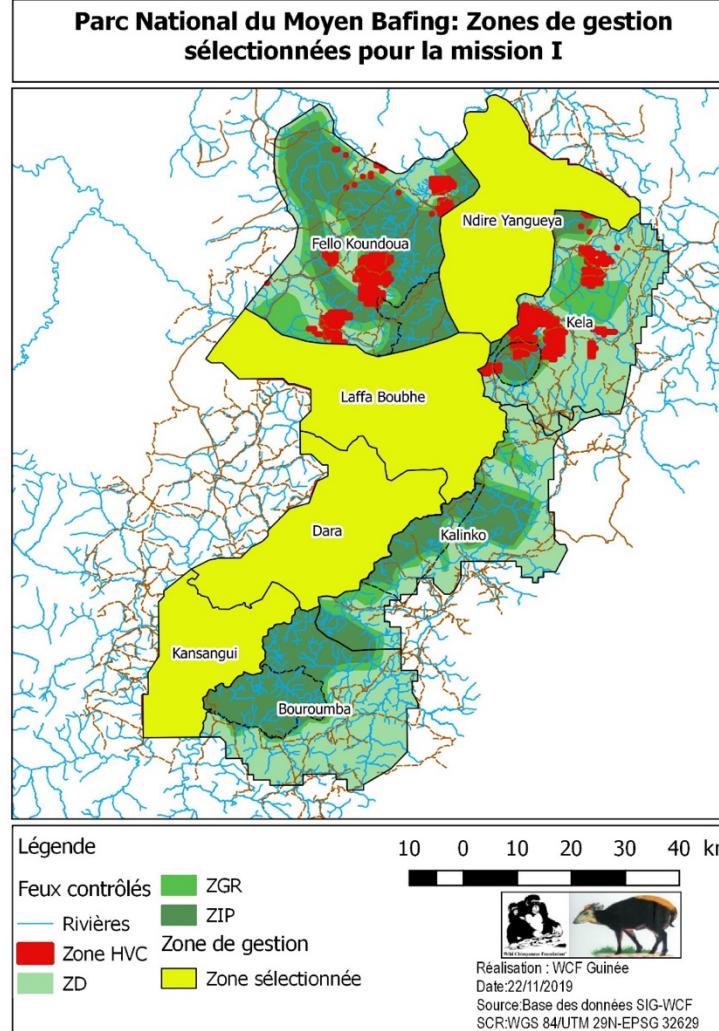
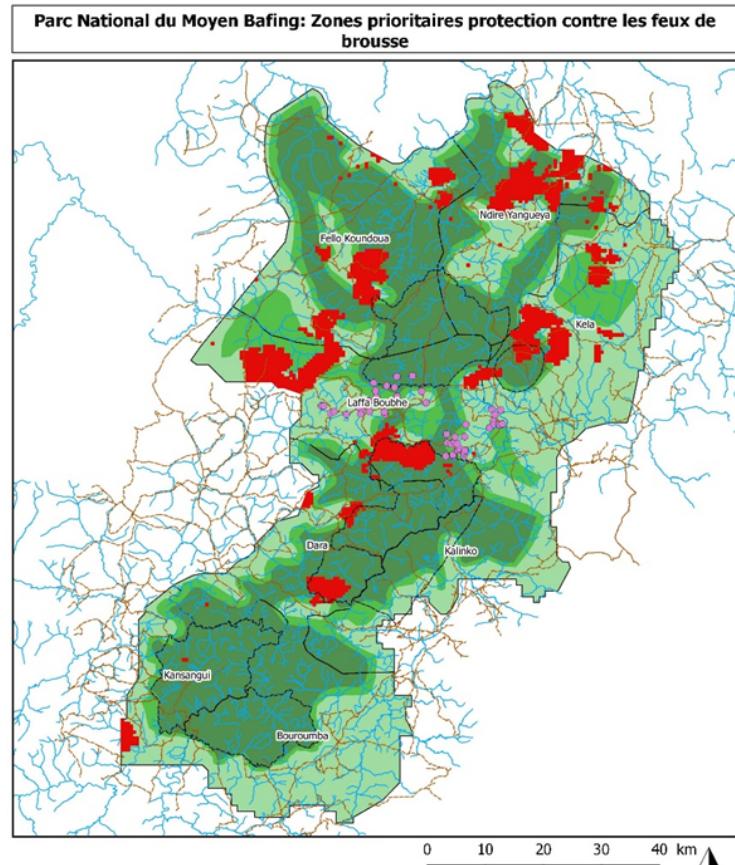
**Figure 22.** Average number of fires detected at 10-day intervals throughout the MBNP over a 10-year period, with a maximum of 5 within a 1-km pixel



**Figure 23.** Map of bush fire impact/intensity within the MBNP

**Table 13.** Organization of actors for the implementation of the bushfire strategy

	Actors	Roles	Scale
1	Village/Intervillage Committees for Conservation and Development	Communication relays (information, awareness-raising and education) Trainers on technical aspects of fire management (firewalls, early lights, late lights) Monitors the application of the measures defined by mutual agreement in the VMPs (process of monitoring-evaluation of the agreements). Application of sanctions in accordance with the texts governing them	Micro (Village)
2	General Interest and Wildfire cooperatives	Communication relays (information, awareness-raising and education) Implementation of agreed measures in VMPs with early warning mechanism Popularization of fire management techniques (firewalls, early fires, late fires)	Micro
3	Union Communal of the Village / Intervillage Committees for Conservation and Development	Lobbying A3CD and the authorities of the governorates, Prefectures, Sub-Prefectures and Communes for a better management of fires at the level of communes Proposes management measures to the authorities, local elected officials and technical services at the level of the corresponding park management zones. Communication relays (information, awareness-raising and education)	Méso (Secteurs de gestion)
4	Communal Assemblies for Concertation for Conservation and Development	Participation in the elaboration of fire management measures at the communal and intermunicipal level Follow-up evaluation of the implementation of the measures mutually agreed between A3CD members on the basis of the VMPs and the NMBP Development Plan.	Méso
5	Decentralised Technical Services	Application of the measures agreed by the A3CDs Monitoring for compliance with existing legal provisions and measures agreed by the A3CDs Accompaniment of populations or their grassroots organizations Financing of fire management measures (ANAFIC, USFS, WFP, OMVS, others)	Micro, Méso et Macro (PNMB)
6	Administrative authorities (Governors, Prefects, Deputy Prefects, District Presidents and Heads of Sectors)	Communication relays (information, awareness-raising and education) Monitoring and application of the legal texts in force	Micro, Méso et Macro (PNMB)
7	Locally Elected Officials (Mayor and City Council)	Communication relays (information, awareness-raising and education) Financing of fire management measures Integration/Reinforcement of the fire management aspect in PDLs	Micro et Méso
8	Religious Leaders	Communication relays (information, awareness-raising and education) Advisors	Micro



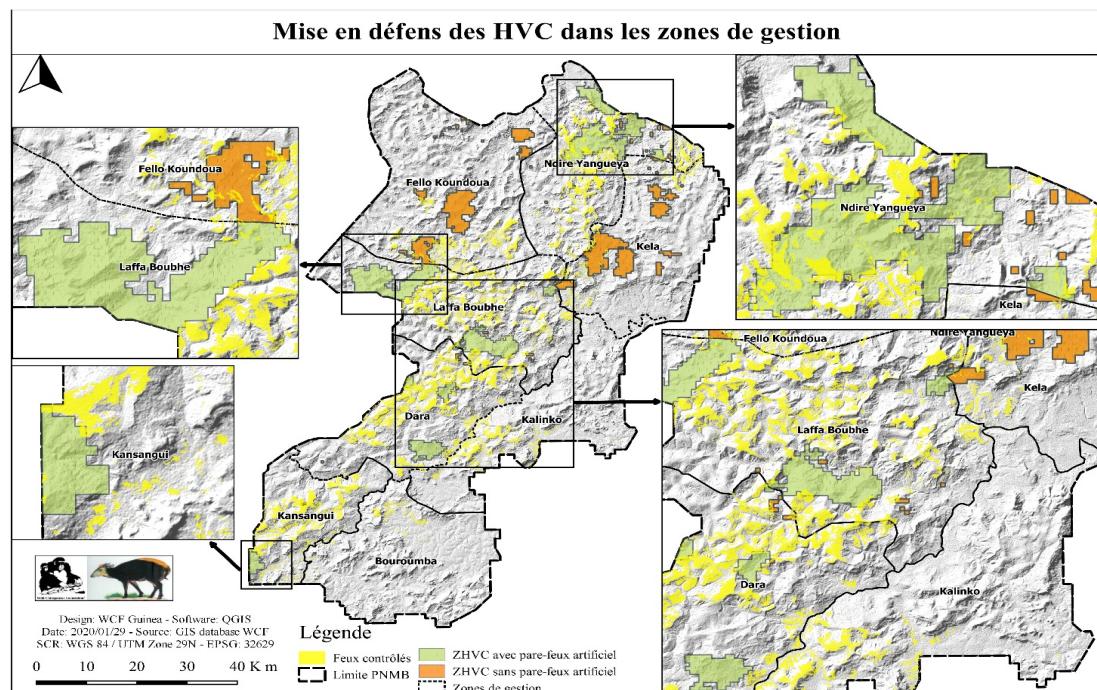
**Figure 24.** a) Maps of HCV sites in the park (left) and b) areas involved in the programme to train communities in firebreak construction and early savannah burning (right)

**Table 14.** The early ignition and firebreak teams were made up of project managers, town hall officials, cantonments and local communities (contractors).

Structure	Laffa	Dara	Kansangui	Ndire Yanguuya	Total
Project PNMB	3	2	2	4	11
Cantonnements	2	2	2	2	8
Town hall	3	4	5	4	16
Contractors	280	120	50	120	570



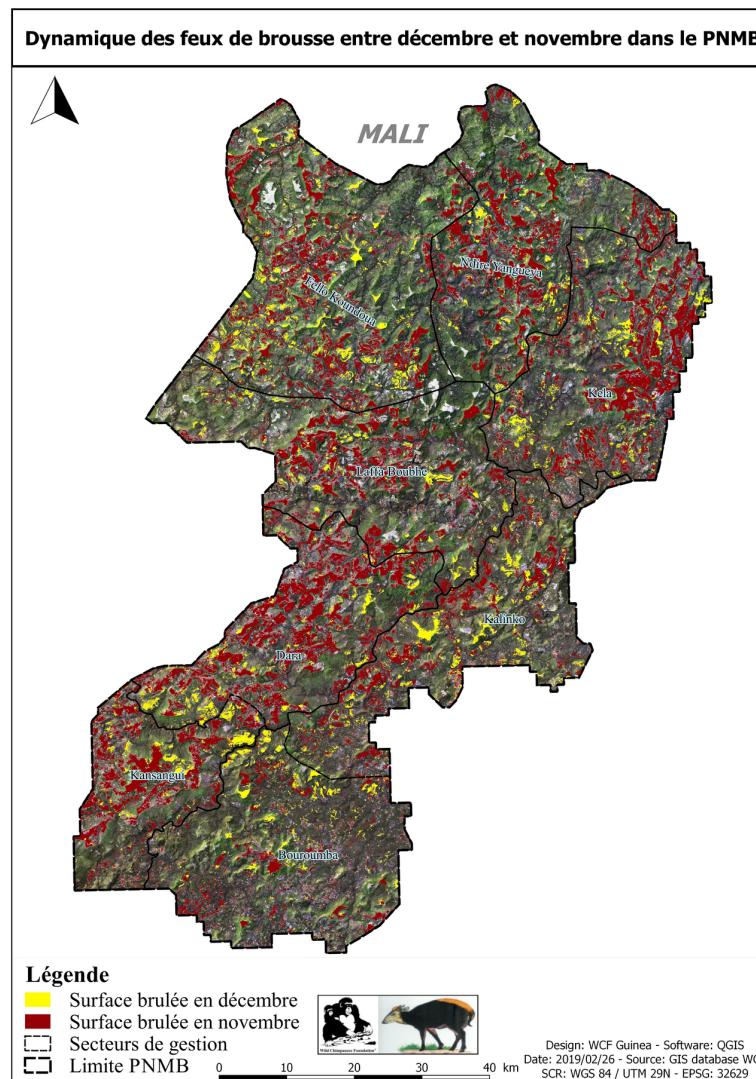
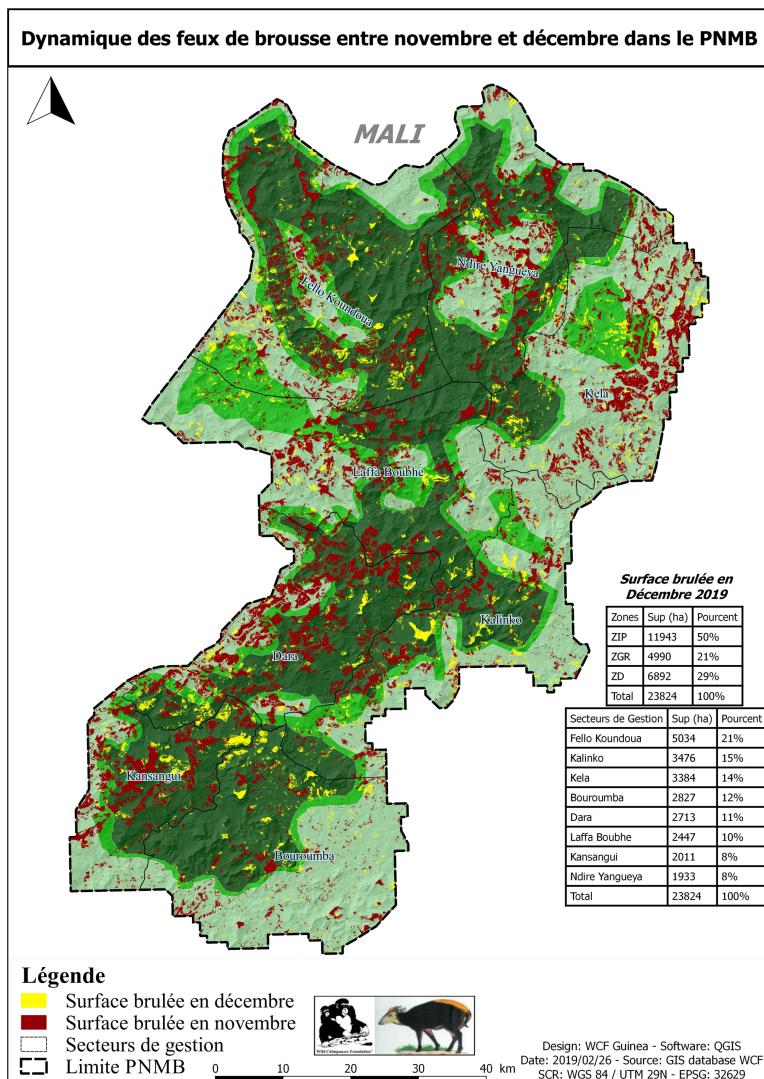
**Figure 25.** Controlled burns in the Laffa Boubhe management area



**Figure 26.** Map of MBNP indicating the HVC zones protected by controlled burns and fire-break measures

**Table 15.** Synthesis of annual fire-use practices

Social practices involving fire	Month											
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar	Apr.	May	June	July	Aug.	Sept.
<b>Agriculture</b>		🔥	🔥	🔥		🔥	🔥	🔥				
<b>Animal husbandry</b>		🔥	🔥									
<b>Hunting</b>						🔥	🔥	🔥				
<b>Apiculture</b>							🔥	🔥	🔥			
<b>Cooking</b>	🔥	🔥	🔥	🔥	🔥	🔥	🔥	🔥	🔥	🔥	🔥	🔥
<b>Forge</b>						🔥	🔥					
<b>Religious education</b>		🔥	🔥	🔥	🔥	🔥	🔥	🔥				
<b>Tapade</b>								🔥	🔥			
<b>Village grounds maintenance</b>		🔥	🔥					🔥				
<b>Protection</b>	🔥	🔥										
<b>Seasonal risks</b>	Early dry-season fire Slow propagation Favours the growth of woody species			Mid dry-season fire Propagation more advanced			Late dry-season fire Rapid, intense propagation			Rainy season		
<b>Impacts to vegetation</b>	Herbaceous species and small trees are vulnerable			Herbaceous species and small-med. sized woody plants are vulnerable			Ground cover species and larger trees are vulnerable					



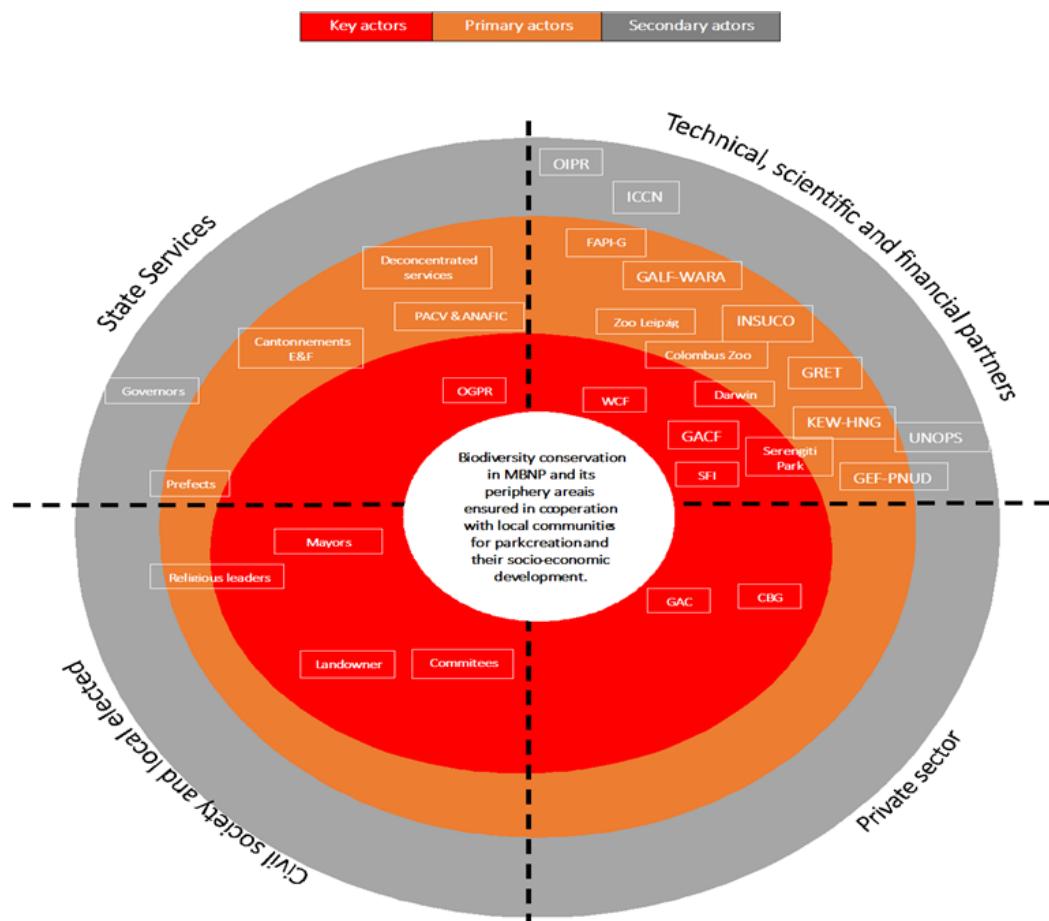
**Figure 27.** Bush fire dynamics November - December 2019; a) map of the park with burned areas in relation to zones (left); b) in relation to forest cover (right)

#### 4. Stakeholder Engagement Plan (PEPP)

- ❖ **Objective:** To build a network of partners for information and collaboration within the NMBP project
- ❖ **Results:** A broad network of partners is being developed to integrate our activities with those existing in the region and to ensure that we have the best expertise available in the region. Figure 28, below, presents our partners and the various joint activities we are developing.

Establish a list of potential partners (PA - R7A.A3)

A directory of national and/or international NGOs based in Guinea is regularly compiled in a database. Today, more than 50 structures have been listed with verified and updated email addresses and/or phone numbers. The database also mentions the intervention zones, administrative regions and prefectures where these structures are based.



**Figure 28.** This figure shows the main (red), primary (orange) and secondary (grey) stakeholders and their positions in relation to the biodiversity management and conservation project in the MBNP

### **List of abbreviations for the PEPP :**

ANAFIC= Agence Nationale de Financement des Collectivités  
ANPROCA= Agence Nationale pour la Promotion Rurale et le Conseil Agricole  
APMY= Association des producteurs de Mali Yembering  
APSEG= Association pour la Promotion de Santé et l'Éducation en Guinée  
BIOTOPE/COMBO= Bureau de consultance Biotope et Conservation, impact Mitigation and Biodiversity Offsets in Africa  
FAPIG= Fédération des apiculteurs du Foutah Djallon  
FPFD= Fédération des paysans du Foutah Djallon  
GRET= ONG française internationale de développement de projet agro-écologique  
HGN= Herbier Guinéen National  
INSUCO= Bureau d'étude pour les aspects sociaux de projets industriels  
KLM Films= Entreprise spécialisée en communication graphique  
MPI EVA= Institut Max Planck d'Anthropologie Evolutive  
MATD= ministère de l'administration du territoire et de la décentralisation  
PACV3= Programme d'appui aux communautés villageoises, phase 3  
RRT/RRD/RRDa/RRK= Radio rurale de Tougué, de Dindiraye, de Dabola et de Koubia  
UNOPS= United Nations Office for Project Services  
VHS= Volkshochschule spécialisé dans les projets d'alphabétisation en Allemagne et dans le monde

The key players are those directly involved in the implementation of activities in the MBNP. Key players are those involved in the implementation of the project at defined stages of the process. Secondary stakeholders are those who are essential to the implementation of the project, but who are not directly involved.

This diagram will be updated whenever the configuration of actors changes, for example if a new player has just arrived in the area.

We have also produced a contact list of stakeholders and provided it to our donors, including GAC Compliance.

Among the many meetings that the project held with the various stakeholders, we can mention here that three series of meetings were directly linked to the follow-up of the 2018 discussions during the 3rd Community Consultation Framework (CC3, cf. Annual Report 2018). These exchanges directly involved a large number of stakeholders, representing the relevant actors in local society, and included presentations and discussions on the following topics: related laws, the MBNP creation process and news, inter-ministerial proposals, bush fires, human-wildlife conflict resolution, communal assemblies and rural development, etc.

For example, in April 2019, we strengthened the link between the decentralized services, local elected officials and the structures involved in the MBNP creation process. Overall exchanges with the administrative authorities, local elected officials, decentralized technical services and the decentralized administration of Labé, Tougué and Dabola were assisted by a total of 237 people, including 224 men and 13 women (see photos, Figure 29).

The results obtained showed that the content of the Ministerial Order is already known by most of the participants thanks to the CC3 mission, which was appreciated by the new participants. In general, they have a good impression of the activities carried out and programmed in the MBNP (agro-ecology, rural development, participatory mapping, RNE,

land use plan, demographic study, bio-monitoring, etc.). The local elected officials recalled the need for their effective involvement in all activities, and they insisted on the integration of the Land Use Plans in the Annual Investment Plan of the communes.

They also appreciated the approach and modalities of the choice of opinion leaders to support the MBNP in order to bring the communities closer to the project (Tougué and Dabola sides). The participants chose 3 counterparts out of 5: Tougué DIALLO Ibrahima, Dinguiraye DIAKITE Alhassane and Dabola KEITA Issa. For Koubia and Mamou, a period of 10 days had been granted for the choice of counterparts. This deadline was then respected. The participants were informed of the place of opinion leaders and their counterparts in the process and the links with the governance structures of the NMBP management system.

In addition, and given the urgency of the upcoming fire season, a workshop was held in Labé to communicate the bush fire management strategy and the MBNP complaint and grievance mechanisms. This activity is in line with objective 2 of the 2018-2020 action plan, which is to "strengthen the involvement of the surrounding populations in the conservation of the MBNP's natural resources".



**Figure 29.** Rencontre à Dabola, Avril 2019 (gauche) et à Tougué, Avril 2019 (droite)

Thus, a 2-day workshop was held in Labé, and brought together 13 (Kouratongo, Gagnakaly, Kalinko, Kollet, Kansangui, Gadhawoundou, Fello koundoua, Kollangui, Teguereya, Lansanaya, Diatifere, Koïn and Tougué) communal assemblies (A3CD) around the issue of bush fire management strategy and mechanisms for managing complaints and grievances.

### Realising potential partnerships (PA - R7A.A5)

During this year 2019, we have entered into several partnerships such as:

- For environmental issues, the Max Planck Institute of Evolutionary Anthropology, the Robert Koch Institute, the Biotope office, and the Royal Botanical Garden Kew (with the National Herbarium of Guinea) have participated in several actions;
- For the social aspects, the international NGOs GRET, World Vision Senegal and the INSUCO office were involved in the project;
- The MBNP, through the WCF, has developed a partnership with ANAFIC, with the aim of harmonizing interventions in the communities of the MBNP area and to seek co-financing of the VTMPs (Village Land Management Plan), included in the local

development plans (LDPs) that are financed by this structure. This is a standard for the OGPR, and its partners are seeking to replicate the standards.

New partnerships have also been consolidated or are continuing with:

- For communication actions, we have developed an agreement with the local radios of Tougué, Dinguiraye, Dabola and Koubia;
- The results obtained by the study on the mapping of the territories of the PNMB, their history and cultures will be presented at an international symposium in the second half of the year in Benin;
- With the Nimba law firm, the legal supervision of the Middle Bafing National Park project, as well as the legal opinions on the PPP and the presidential decree is continuing;
- The certification of financial and accounting operations and assistance with monthly tax declarations is being carried out with the firm SFA Conseil.

Others are under discussion, namely:

- The Royal Botanical Garden Kew and the National Herbarium are volunteering to continue the research work in the PNMB on plant biodiversity;
- A partnership is under discussion with the RTG as well as with the private group HADAFO Média for a television visibility of our actions and conservation issues;
- With the University of Oxford and the NGO PANTHERA we are developing a project on the understanding of regional corridors on the migration of large carnivores and their protection.

#### Participate in the creation of innovative financing mechanisms for the management of the park (PA - R7B)

Together with the World Bank, the WCF team and Christophe Boesch support the idea of creating a Trust Fund for the Protected Areas network. A specific funding from the World Bank is indeed foreseen for this purpose, and this following the organizational audit of the MEEF (carried out by the UNOPS/EU project) and the workshop that WCF co-coordinated in December 2018. The Trust Funds of Guinea Bissau, Mauritania, DRC and Côte d'Ivoire were present.

In addition, the Koukoutamba Dam project in the park could serve as a first model agreement for these trust funds, as well as the Payment for Ecosystem Services (PES) and the involvement of the management unit in the implementation of the 10-year ESMP. In addition, there are discussions on ecological compensation for impacted chimpanzees, and we hope that in the second half of 2019 there will be a positive outcome of these files.

In addition, the mining operator Toubal wishes to operate in the communes of Kollet and Kouratongo in the Prefecture of Tougué. It is certainly very open to dialogue and the inclusion of environmental issues related to the Park.

#### The Middle Bafing National Park is created (PA - R1A)

An Interministerial Commission was held in May 2019 and proposed areas for clarification of the elements of the harmonization strategy among stakeholders. A field mission was carried out from 18 to 24 June 2019 with these same stakeholders in order to finalize the document

of proposals to be presented to the office of the Commission and then to the Prime Minister's appreciation (second half of 2019).

As a reminder, it is in 2011 that the Guinean Office of Parks and Reserves (OGPR) and its partner the WCF started their collaboration in the signature of a framework agreement aiming at "the sustainable management of fauna in the Protected Areas and areas with high biological diversity in the Republic of Guinea". An inventory of the fauna of 11 Protected Areas in Guinea, as well as of the entire Foutah Djalon Massif, was carried out. This was financed by the mining company GAC and other international donors. This study aimed to identify Areas of High Biodiversity Conservation Value.

Thus, in order to develop a strategy to harmonize socio-economic development projects (the construction of a dam at Koukoutamba, its high voltage lines and the asphalt road via Tougué and Kasangui, mining activities such as the Toubal to Daara or the railway project from Kollet), and the biodiversity conservation project (creation and management of the Moyen Bafing National Park), the OGPR, and its partner the WCF, planned and implemented concrete actions for the 5 targeted prefectures (Tougé, Dinguiraye, Mamou, Kouibia and Dabola) within the framework of the creation of the PNMB and its management.

Then, concerning the creation of the Moyen Bafing NP, important recommendations were elaborated by the Interministerial Commission (A/2017/848/MEEF/MMG/MEH/SGG) which includes the Ministry of Environment, Water and Forests (MEEF), the Ministry of Mines and Geology (MMG), and the Ministry of Energy and Hydraulics (MEH), which are in charge of these discussions.

Several meetings were held in May and December 2017, July 2018 and May 2019. In June 2019, a field mission was carried out in the park, bringing together all the actors involved in the major project files, i.e. the park, the dam and the mines. They were accompanied by various actors including local elected officials, representatives of ministries and regional technical services. It ended with a meeting in September 2019 that clarified the technical proposals developed during the field mission. The general recommendations of the meeting are as follows and the responsibilities of the different actors were identified.

Among the most important, it has been proposed that:

- In the spirit of conciliation of the 3 projects, the commission recommended that the MEEF/CPDM-Ministry of Mines provide the necessary elements to clarify the limits of the MBNP (geographical coordinates) in order to extend the research permit to the Toubal mining company for the realization of its ESIA. The ESIA of the three projects will be brought together to compile the sum of the residual impacts and to conduct a strategic environmental study for the three projects. This study should be conducted on a more global scale and take into consideration other projects in the region, such as the UNDP Bafing-Faleme project.
- As regards the Toubal mining company, the disposal of minerals should be analysed by a specific commission including the Ministry of Transport and other infrastructure projects such as the Mali - Mamou railway corridor, the rehabilitation of National 7 and ECOWAS projects such as the bridge over the Bafing River. The definition of environmental mitigation measures, including bridges allowing the passage of animal species, is essential. Furthermore, for the disposal of minerals, the least favorable

option is the railway through Dabola, the best option would be the railway through the west, outside the MBNP, and the third would use National 7. There is a need to conduct a strategic analysis on this issue, and resolution of this issue is essential for the survival of the CAG-CBG compensation.

- With regard to the Koukoutamba dam, given the variant studies carried out previously, it seems essential to seek to define avoidance measures regarding the installation of the quarry and the base life. Mitigation measures will also be proposed, including the complete and contractual restoration of the quarry, and the impact of the installation of the base life will be analysed. Subsequent discussions during the construction phase of the quarry and base life will consider the possibility of relocating the base life and quarry sites. These analyses will be forwarded to the responsible ministries for decision. In addition, resolution of this issue is essential to the survival of the GAC-CBG compensation.
- In view of the Resettlement Action Plan (RAP), it will be necessary to analyse the conditions for relocation (World Bank SP 5, 7 and 8), and if possible, relocation outside the MBNP boundaries will be given priority. No resettled persons will be installed in the core area of the park. Similarly, it will be important to analyse the installation of fisheries outside the MBNP. Like the other two points, resolution of this issue is essential for the survival of the GAC-CBG compensation.
- Payments for ecosystem services must be quantified and negotiated with the control services during the dam operation phase, in accordance with the Water and Environment Code;
- The establishment of a joint commission responsible for amending the Koukoutamba Dam Environmental and Social Management Plan to incorporate the concerns of the NMBP management measures.

In addition, the Ministerial Order A/2017/5232/MEEF/SGG establishing a process for the creation of the Middle Bafing National Park defined the broad lines of the management guidelines for the 3 zones of the park (Table 16). Thus, together with OGPR and other stakeholders, the WCF has continued the work on the definitions of the guidelines. On the basis of a consensus, communication tools and signs were prepared for a first test with the pilot sites.

#### **Establishment of committees (PA - R2A.A3)**

In order to meet the standards issued by the IFC and those in force in the Republic of Guinea, the community consultation framework developed by OGPR and its partner the WCF aims to develop a social performance respectful of the communities. This framework is based on, and is in line with, the practices and systems of consultation and informed participation to give rise to more in-depth exchanges of views and information, as well as consultations organized for the consideration and involvement of the opinions and sectoral development programs of other departments of the Guinean Government in order to have a harmonious and balanced development of the communities concerned by the creation of the Middle Bafing National Park.

**Table 16.** NMBP Zoning Guidelines

MBNP Zoning	Description
<b>Integrally Protected Zone (ZIP)</b>	<p>The following are strictly prohibited among others:</p> <ul style="list-style-type: none"> <li>○ The pursuit, slaughter, trapping, capture of all animals, the destruction of their lodgings or nests, the collection of eggs and any act likely to harm or degrade the spontaneous vegetation;</li> <li>○ The possession and carrying of any weapon;</li> <li>○ Any logging, farming, fishing, fishing or mining exploitation;</li> <li>○ Any grazing of domestic animals;</li> <li>○ Any excavation or prospecting;</li> <li>○ Any new human settlement and their activity plots.</li> </ul>
<b>Natural Resource Management Zone (ZGR)</b>	<p>The following are allowed:</p> <ul style="list-style-type: none"> <li>○ The sustainable harvesting of all non-timber products intended for family food consumption;</li> <li>○ The development and exploitation of lowlands for agricultural purposes designed and managed in an environmentally friendly manner.</li> </ul> <p>The management rules for each sector of the TMA are defined in consultation with the communities concerned, taking into account the geographical and cultural context, the conservation of ecosystems, flora and fauna, the protection of watersheds and resilience against the effects of climate change, and included in the TMPs.</p>
<b>Development Zone (DZ)</b>	<ul style="list-style-type: none"> <li>○ Dwellings and socio-economic activities are allowed, and these must comply with pro-environmental specifications, in collaboration with the park's teams ;</li> <li>○ The customary use rights of the populations are maintained as long as they do not destroy the values of the park and specific management measures are defined with the park teams;</li> <li>○ In consultation with village communities in the DZ, a VMP is established taking into account the conservation of ecosystems, flora and fauna, watershed protection and resilience against the effects of climate change.</li> </ul>

In particular, it is essential to prioritize an inclusive participation of all stakeholders, notably the ministerial departments targeted by the Interministerial Commission, the various relevant administrative and political authorities, sub-regional organizations and communities and their representatives. A Stakeholder Engagement Plan has been developed for this purpose.

The recording and archiving of data required for the Decree files are defined in a data management protocol that is available. A working group is in the process of being organized with the MEEF's legal adviser as leader.

During the third round of community consultation (CC3), the first principles of the different committees were discussed (at the village level, commune level for consultation and conflict management, and national level for general coordination).

Strengthening the organizational capacities of local communities within the framework of the PNMB project cannot do without the structuring or organization of local communities (Table 17). Support for the establishment of Village Committees for Conservation and Development (VCCD), Economic Interest Groups (EIGs), and General Interest Groups (GIGs) as well as their networking will be mainly sought. These different organizations will be the crucible for the definition of common objectives in the framework of conservation and local development, with the implementation of the VGMPs. Also, the strengthening of their

organizational, technical and operational capacities will remain a concern in order to ensure the leadership of these grassroots organizations in the sustainable development of village territories. (Figure 30)

It is therefore planned that within the same commune, these VCCDCs will be represented by a Union, which, with the support and supervision of the NMBP Management Unit, will participate in advocacy and negotiations with the town halls to increase efforts towards sustainable development of the territories concerned. No relationship of subordination will be tolerated between the Unions and the CVCDs, and these two entities will be able to function if either one fails. Indeed, organizational development is a long-term process.

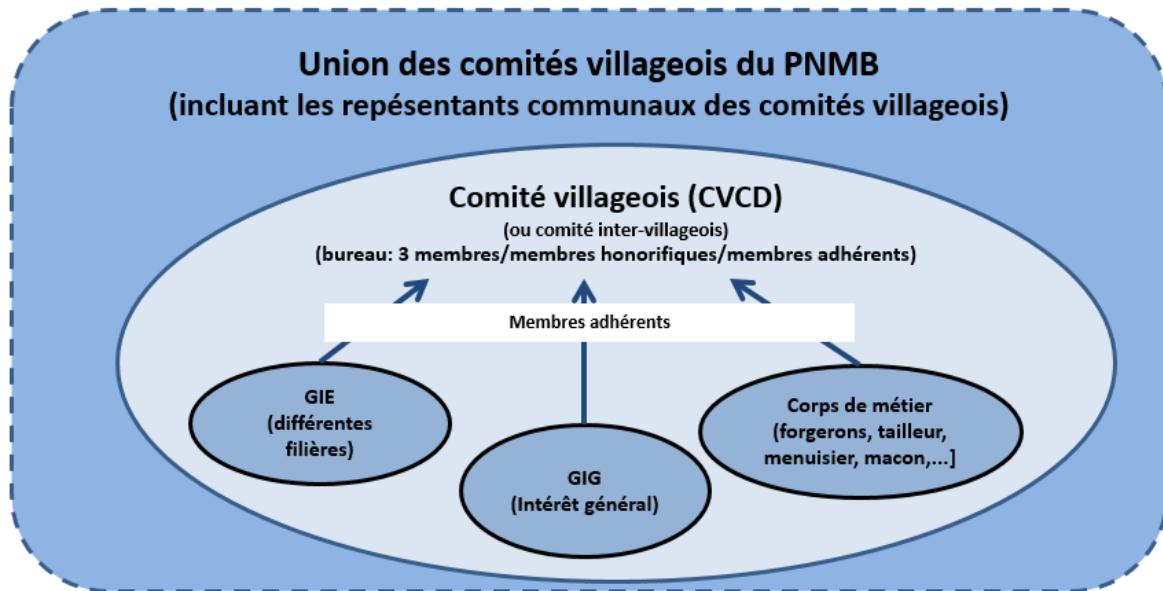
However, the aim here is to increase the opportunities for seeking funding and multifaceted support from these and other relevant communes for the implementation of the VMPs, while ensuring that the localities of the park's communes are part of a logic that respects the NMP's natural resource management guidelines and principles.

These exchange assemblies, supported and monitored by the PNMB, will be as many transmission belts between the various development initiatives in the communes of the park and the managers of the PNMB, who are the guarantors of the respect of the established management principles.

An umbrella organization representing the various VCCDCs and their Unions will be activated to intervene during the monitoring and governance committees for the management of the park (one of the bodies proposed in the draft management delegation contract for the park). The purpose of these meetings will be for the park manager to present the state of management of the park, its opportunities and challenges, as well as the latest news and prospects for action. This will be done in front of all relevant stakeholders. The figures below show the structuring of the VCCDs, Unions and Fairies for the NMBP. (Figure 31)

**Table 17.** Number of participants who attended the creation of the Committees

	Location	Nb of participants		
		Men	Women	Total
13 Village committees	Foungani, Kalinko Konkero, Kalinko Missira, Kela, Missira Djallonke, Mareinfaya, Madina 2, Badala, Balagan, Baridondé, Yallagueta, Ley Kimbely, Idia			
9 Inter-village committees	Lallabara + Lallabara Fello, Sangan + Bossiko Ley + Bossiko Dow, Koulifakara + Ghada Amara, Laffa Boubhe + Botoko, Dakacire + Bantankountou, Balabory + Kokoutamba, Mougne Dow + Mougne Hakkoude + Mougne N'Dantary, Dara + Foreya + Dow Dara, Yhewe + Beindougou + Soubedon + Kounta + Lebewi	970	580	1550



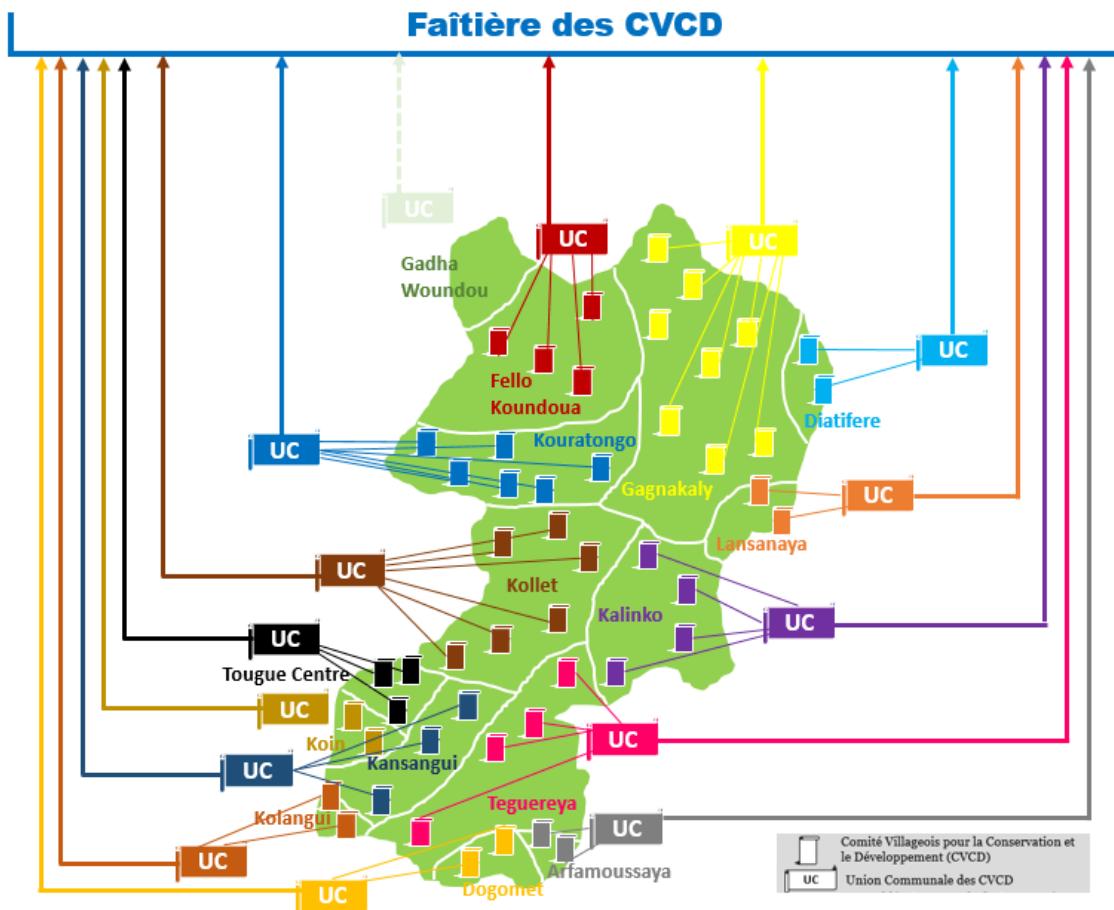
**Figure 30.** Organisation of village communities in the form of village committees with their members (top); Candidates for the post of President in Mareinfaya (bottom left); the President, the Secretary General and the Treasurer designate of the VCCC of Kalinko Konkero (bottom centre); elected President, the Treasurer and the Secretary General of the VCCC of Kalinko Missira (bottom right)

To date, 13 Village Committees have been set up as well as 9 inter-village committees. A total of 37 villages, including 22 pilot villages, have been involved, as shown in Table 17.

Twenty people were identified for the establishment of General Interest Groups (GIGs) for fire and reforestation at a rate of 10 people/theme during the sessions to set up the VCCDs or CIVCDs. Thus, for the 22 pilot villages, a total of 440 people were identified to specifically address the issues of fire and reforestation.

The management of complaints and grievances in the PNMB is underway, and a collection and recording mechanism is being tested.

Five cases were recorded in the first half of 2019, all related to potential cases of chimpanzee attacks on children. As Professor Boesch has developed a communication and awareness-raising tool to train our teams to explain chimpanzee behavior and to recognize signs of aggression, a mission to resolve these grievances has been conducted. It concluded that despite the resentment of the populations, it is difficult to establish that these are genuine aggressions due to the Chimpanzee species.



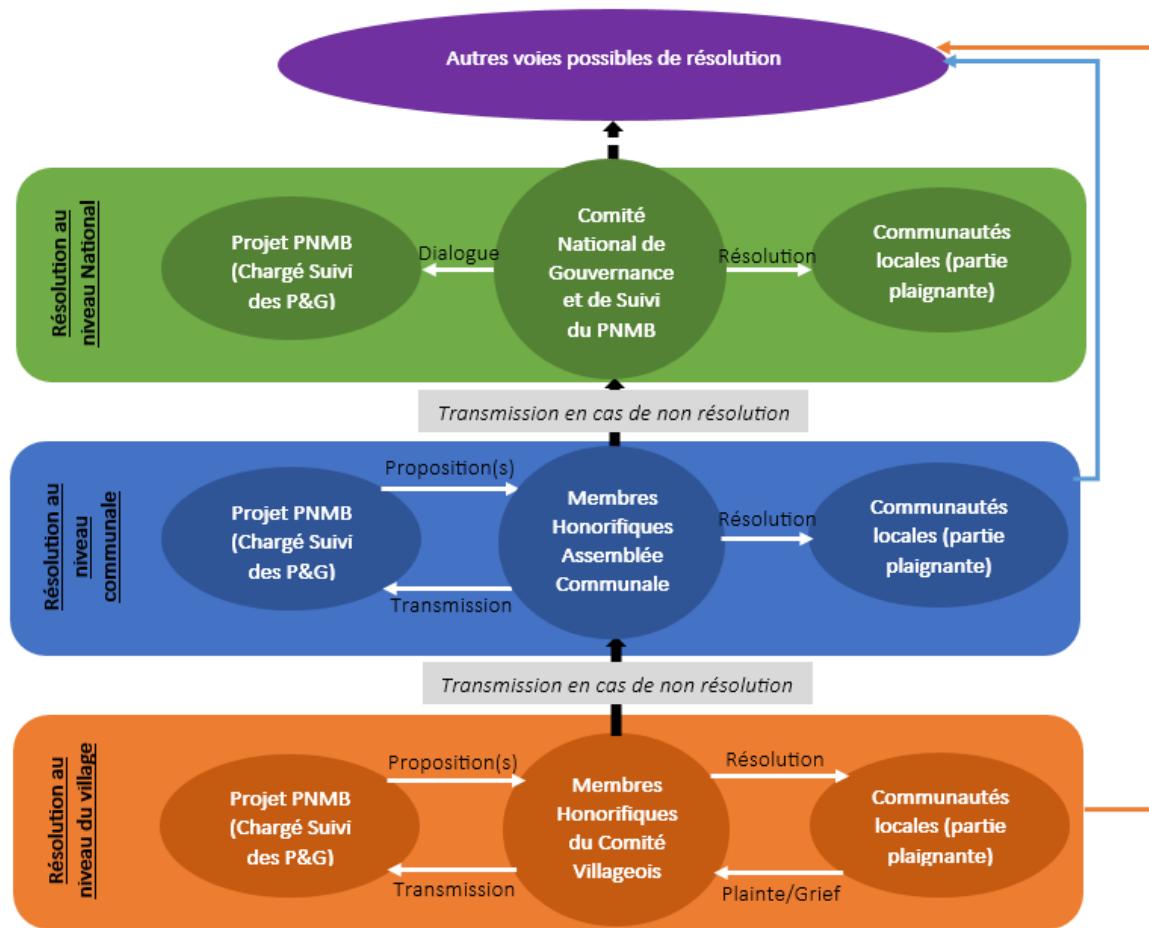
**Figure 31.** Structure of local community organisations in the NMBP

It is also planned to set up synergies and bridges between the management systems for these grievances and complaints by ANAFIC, in support of the Communes, and that of the NMBP. This is part of the partnership proposal.

To date, the said mechanism, takes its roots at the village level, then extends to the deconcentrated or decentralized level and to reach, if necessary, the national level lastly. This mechanism should be able to detect germs likely to generate complaints or grievances, to register them if complaints or conflicts are found, and to enable them to be handled or resolved and subsequently followed up (Figure 32).

The PMPRB's complaint and grievance management mechanism has been produced, along with a collection and recording sheet for this purpose. 12 complaints were received in 2019 as presented below (Table 18).

As part of the involvement of various stakeholders in the governance of the PMPRB, 21 workshops were held. 18 concerned the setting up of Communal Assemblies of Concertation for Conservation and Development (A3CD), 2 contributed to the reflection on livestock in the PNMB and 1 concerned the strengthening of the fire strategy. In total, 15 A3CDs have been formalized, and recommendations on livestock farming and fire management in the PNMB are available. (see photos, Figure 33)



**Figure 32.** Complaint and grievance management scheme for effective monitoring and impartial conflict resolution. Honorary members of the village committees will play the central role in this procedure and will be in charge of assessing whether complaints and grievances concern the project or are the responsibility of other operators. If they fall within the project's jurisdiction, they will forward the complaint to the project which will provide proposals for resolution of the complaint which will then be negotiated through the committee with the complainants. If the resolution is not possible, the complaint will then be forwarded to the authorized Communal Assembly.

**Table 18.** Example of complaints received in 2019 by the Complaints and Grievance Committees

Location	Nb	Nature of complaints	Nature of agreement	Content of agreement
Boussouria	1	Insufficient communication between NMBP teams and the population during early fire missions and villagers' reports of rumours of eviction. As a result, the NMBP teams refuse to carry out their missions.	None	Following an exchange meeting, a request was made by the population for more time for a dialogue between the young and the wise men of the village.
Dara	2	Disclaimer that Dara Centre is the sole recipient of NMBP support. Consequently, refusal to set up an Intervillage Committee even though only one boundary encompasses the 3 villages.	Written	After several meetings with the local authorities and the population, a letter of pardon was formulated co-signed by the District President of Dara, a retired Captain of Dow Dara, Dow Dara Area Chiefs, Foreya and the Mayor of Kolut. Commitment made for the establishment of the Inter-Village Committee and the facilitation of project activities.
		Denunciation of the fact that the project will reduce their agricultural areas, and the populations expected a financial reward from the PNMB.	Verbal and written	

Location	Nb	Nature of complaints	Nature of agreement	Content of agreement
		Consequently, refusal to allow the NMBP teams to carry out participatory mapping.		
Kalinko konkero	2	Cattle attacks by a leopard at Kalinko konkero.	Ecrit	Commitment to work with the WCF, and to favour exchanges to find a sustainable solution.
		Rumour of a possible decline, accentuated according to the populations by the implementation of resource management signs. The non-reception of WCF teams in the village was one of the consequences.	Verbal	Acceptance by the community of the implementation of the awareness panels and commitment to work with the WCF, and to prioritize exchanges in order to find a sustainable solution.
Koulifakara	1	Attack of a little girl by a chimpanzee.	Ecrit	Commitment to work with the NMBP team and a commitment to exchange to find a solution to potential litigation.
Kouratongo	1	Attack of 6 oxen by a Leopard in Kouratongo.	Aucun	Invitation of complainants to a workshop to reflect on animal husbandry in the NMBP.
Laffa Boubhe	1	Setting fire to fallow land	Ecrit	Letter of acceptance of the apologies formulated by the WCF team, and reiterated their commitment to work with WCF
Lallabara	2	Refusal to transport a corpse to Lallabara	Ecrit	Commitment to exchange to find a solution to potential litigation and to work with the NMBP team.
		Refusal of the Lallabara plain development project by the community of Lallabara	Ecrit	Acceptance of the erection of the fence of the plain and to welcome the farmers coming from Koulifakara and Lallabara Fello
Margato	1	Attack of a cow by a lion	Aucun	Simple enumeration of attacks that took place prior to the project
Sangan	1	Pillage of a field of fonio by warthogs and 8 banana plants by chimpanzees.	Aucun	
<b>Total</b>	<b>12</b>			



**Figure 33.** Plenary presentation of the Billan des activités 2019 du PNMB and reflection on animal husbandry in Dabola; committee work on animal husbandry in the PNMB in Labé.

## Consultation of local communities - Step 1: Participatory mapping of village territories (PA - R1B.A2 et A3)

To ensure the participation of local communities in the national park creation process, a first phase of community consultation (called "Cadre de concertation de proximité", CCP1) began in January 2018. This first phase concerns all localities located in the park area, i.e. 255 localities including 232 villages, 16 camps and 7 hamlets. This has made it possible to update the number and names of the localities, and to refine with the communities the delineation of the three zone boundaries, taking into account the mapping of village terroirs and the various modes of use. (see photos, Figure 34)

In addition, it appeared that many areas are either unclaimed or claimed by one or more villages. An initial mission clarified these results, and showed that most of the errors are due to the bias of the guide used. More than 5 clarifications were made during this mission, and the method will be used from now on at each Participatory Mapping mission to remove the errors.

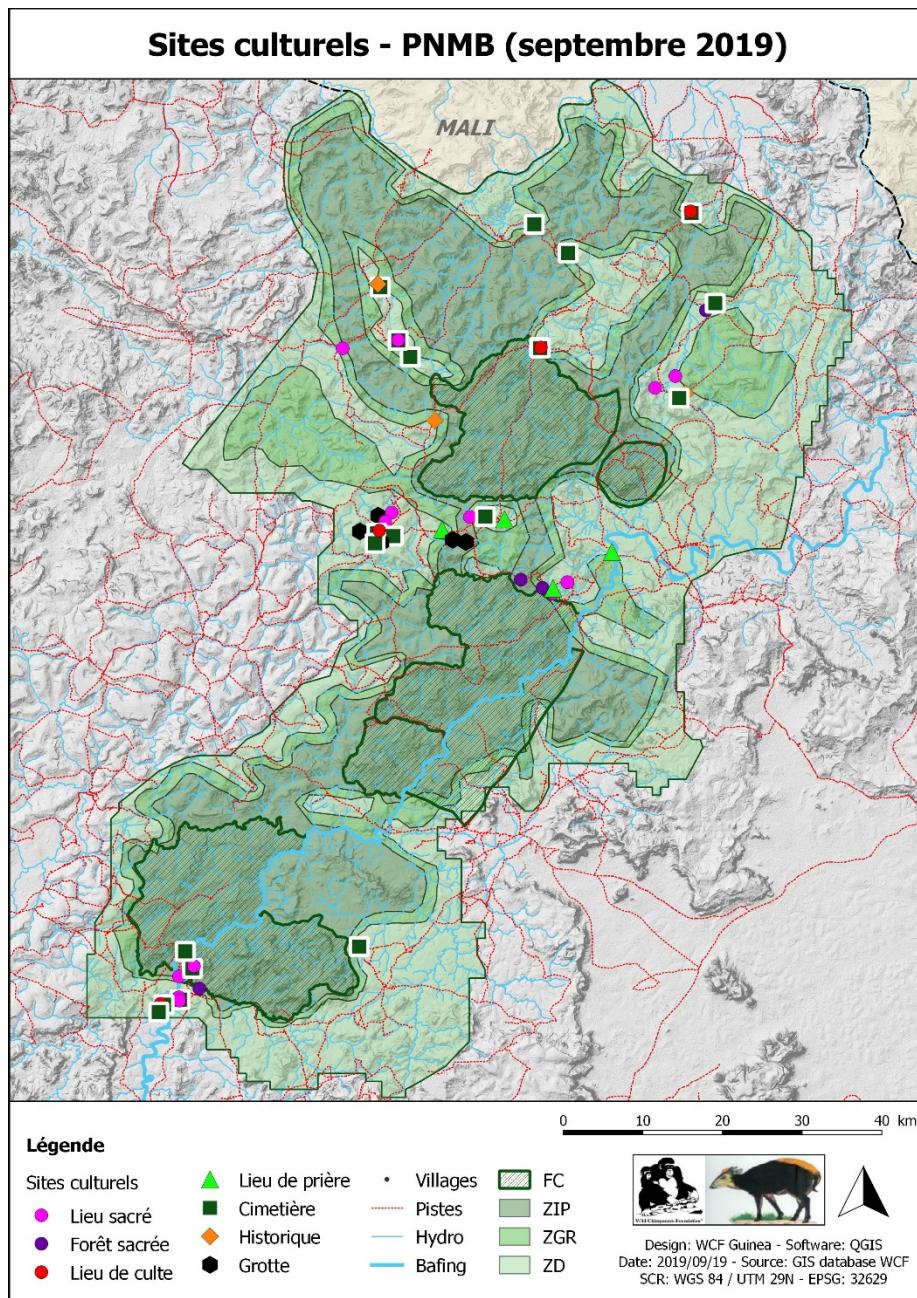
A first CCP1 mission (CARTO 1) was developed in seven pilot villages of the RNA project. The participatory mapping methodology was used to obtain, with the help of as many people as possible, precise information on the boundaries, as well as on the uses of the territories in each village visited: first drawing the elements of the territory and the uses on a blank page, then precise replacement by drawing on layers positioned on a satellite image background, and finally digitizing this information in a Geographic Information System (GIS).

Within the framework of the sustainable development of the village territories of the PNMB, the populations were accompanied and 16 participatory maps were produced. The localities concerned are in particular : Laffa Boubhe, Kalinko Konkero, Kalinko Missira, FOUNGANI, Koulifakara, Lallabara, Sangan, Mareinfaya, Madina 2, Missira Djallonke, Mougne Dow, Bossico Dow, Bossico Ley, Botoko, Balabory and Koukoutamba. These maps show the boundaries, occupation and land use of the different village territories.

In addition, we are conducting an inventory of archaeological, historical and sacred sites of importance to park communities. This is done with the involvement of our sociologist. Figure 35, below, shows the elements on the sacred sites currently recorded.



**Figure 34.** Participatory mapping in Balabory (left) and Mounge Dow (right)



**Figure 35.** Map of currently registered sacred sites in the MBNP

#### Consultation with local communities - Step 2: Territorial management plans (PA - R2A.A5)

A communication system is established between WCF officers and community members to address questions and proposals regarding the implementation of the project. By 2019, and for two selected districts with 7 pilot villages, a land management plan is envisaged (called CCP2) (Figure 36). In addition, another 21 villages have been selected from the 15 rural and urban communes in the national park to develop similar plans by 2019-2020 (Figure 35). The selection of the villages was made in accordance with the Community Consultation Framework (CC3) with the active participation of representatives from the communities and government agencies. In order to include the entire national park area in the creation process,

each rural commune will have to have at least one target village before the park decree is issued (planned for late 2020). The aim of this strategy will be to demonstrate, by taking a sample of territories per commune, the benefits of implementing natural resource management in a concerted manner as an integral part of the creation of the NMBP. Indeed, each specific support to the community will be channelled through this planning and shared governance tool that is the Village Territory Management Plan (VTMP).

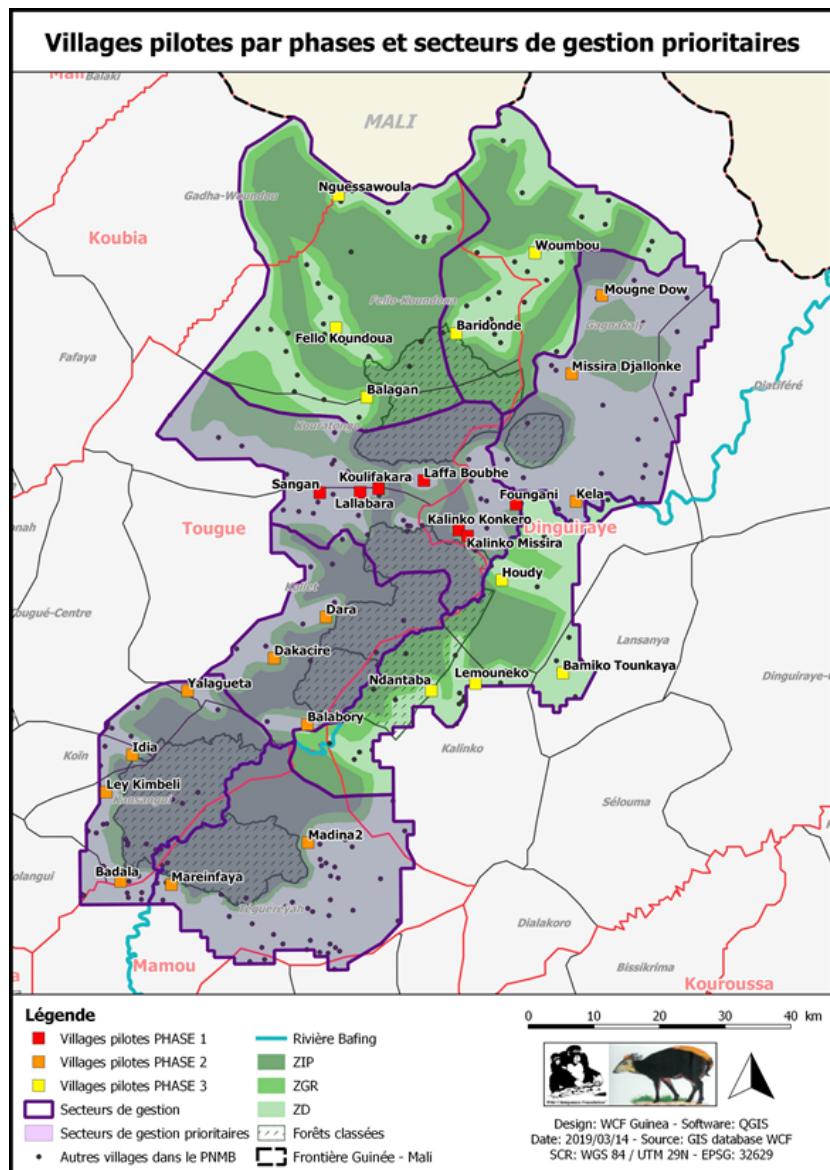
These VLMPs will be defined as a development plan that communities could use to raise awareness and funds with different development partners. As the Government of Guinea has a local development strategy, our interest is to develop these plans through this recognized framework. Thus, a direct link has been established with the Communes and ANAFIC (Agence Nationale de Financement des Collectivités) between the priority actions of the Village Territorial Development Plan (VTDP) and the Local Development Plans (LDP) drawn up within each commune. A partnership is currently being validated. The LDPs of the 14 rural municipalities are available in electronic format. They are consolidated by each municipality's annual investment plan (AIP) and local socio-economic diagnosis (LSD).

The establishment of an area as a protected area induces a change in old practices, especially for populations on the periphery or within the planned boundaries. Therefore, as a key stakeholder, the communities, if not their participation, are de facto an essential cog in the management system of the newly created protected area. In this system, conferring a role to these populations would then begin by making them responsible for a new management of their space, of their territory, which is certainly favourable to the improvement of their livelihood but above all compatible with the conservation of the natural resources of the entity created, which is the protected area. Knowledge of their territory, the analysis of their practices on this territory and the resulting effects are essential to develop realistic proposals for its management or planning. This was mainly achieved during the CCP1 phase, and currently all this information is being collected for the remaining 21 villages.

This is why the elaboration of a Village Land Management Plan (VLMP) is already an important step forward. Moreover, even with support, the communities will have to be the main actors in their elaboration and implementation. It is in this perspective that the project for the creation of the Moyen-Bafing National Park (PNMB) is part of the project, which aims to make the VLMPs a means of appropriation by the communities of the PNMB of the sustainable management of their areas.

For the first 7 villages mentioned above, on the basis of the participatory maps produced, a negotiation process took place with the populations in order to define sustainable management rules with knowledge of the PNMB zoning. 5 TVMP projects are thus available and will be the subject of finalization and restitution in 2020. (see photos, Figure 37)

Collaboration with the town halls and the 5 prefectures has been activated to ensure that these negotiated activities are not called into question. This will be achieved through the monitoring-evaluation processes of the VMPs involving these actors, as well as during the Communal Assemblies and the NMBP Management Monitoring Committee (a body that will be instituted when the PPP is signed).



**Figure 36.** Location map of the 28 pilot villages identified during CCP3



**Figure 37.** PGTV process in the villages of Sangan, Bossiko Ley and Bossiko Dow (left); PGTV process in the village of Lallabara (right)

## Develop an environmental awareness, communication and education plan (PA - R5A.A1)

Our communications team has been gathering information over the past 6 months and has been contacting local and regional partners and media. A first version of the plan has been consolidated.

Similarly, a logo for the NMBP has been proposed, and will have to be submitted to the authorities and communities for appreciation and validation.

## Designing communication tools (PA - R5A.A2)

The activities of the IEC cluster are defined by Objective 5, which consists of improving the visibility of the NMBP with a view to raising awareness of its importance and ensuring its sustainability. This year, the IEC cluster has seen major recruitments, in particular:

- An IEC program officer in March 2019 who became Thematic Coordinator as of July 1, 2019;
- A communication assistant after the departure of the former assistant;
- An IEC support officer;
- 2 activity officers who act as supervisors of the PAN club programme;
- 15 community animators.

Thus, the dynamism of this entire team has enabled the implementation of the various activities involved in the implementation of objective 5, including:

- 04 partnerships signed with the various SDRs of the PNMB (Tougué, Dinguiraye, Dabola and Koubia);
- 02 partnerships with the television stations RTG and Hadafo Media;
- 25 media coverage of various activities involved in the creation of the PNMB during 2019;
- Radio programmes (interactive programmes, micro-programmes, press releases, reports and commercials) produced by the four partner rural radios, namely the rural radios of Dinguiraye, Tougué, Koubia and Dabola, during the various quadrimes (Table 19);
- Radio listening was also monitored and out of a total of 144 people interviewed, 83 people actually and frequently listen to the radios and say they understand the different programmes, 19 listen sometimes and 42 do not listen for coverage reasons;
- The summary of the publications on Facebook gives 06 concerning the activities of WCF Guinea. These publications had a total of 182 "I like" and 67 shares. Indeed Guinea does not have a lot of interest in other countries. It must also be pointed out that there are some productions of WCF Guinea in the process of being distributed;
- The creation of 42 awareness and communication panels followed by the implementation of 27 communication panels designed to raise awareness and communicate on the different activities that are part of the creation of the NMBP (Figure 37) ;
- The creation of various communication tools, notably 5 image boxes on the park's 5 priority themes:
  - 500 leaflets presenting the project for the creation of the PNMB
  - 10 Roll up of NMBP presentation

- The production of 35 posters on the 05 priority themes of the NMBP with the printing of 1000 posters on the NMBP and bush fires.
- Printing of 35 posters on the NIP's 05 priority themes; The realization of the annual awareness theatre tour with 16583 participants including 4096 men, 5547 women and 6940 children; (Figure 38)
- A total of 17 articles were written on NMBP creation activities on the following topics: NMBP biodiversity, NMBP employability, awareness, monitoring, beekeeping, nurseries, RNE, RNA, consultation frameworks, world events related to biodiversity, mapping, etc.;
- There is also training in Community Mobilization and Awareness Techniques for 120 potential candidates for the position of Ecoguards / Animators;
- Awareness raising on the priority themes of the PNMB, bushfires, poaching and human-wildlife cohabitation, with 4758 people sensitized, including 2963 women in 50 villages of the PNMB.

With regard to outreach, awareness messages on environmental protection are disseminated on the basis of a programme established within the framework of collaboration agreements with local radio stations, national media, specialized NGOs such as WARA for training on awareness campaigns on Guinean legislation. In this way, 966 people have been made aware of the different themes (i.e. the PNMB project, forestry legislation, bush fires, deforestation and poaching), including: 385 men, 304 women and 277 children in 18 villages (Teliko, Douroumissidé, Foreya, Daw dara, Dilimbo, Boubhé, Kaliwolo, Daka Sirè, Kogala, Boussouria, Kalinko Konkero, Kalinko Missira, Kokoun, Lallabara, Koulifakara, Botoko, Laffaboubhé and Boundoubori).

**Table 19.** Number of programs based on Rural Radio (RR) Partners

RR Dinguiraye	RR Dabola	RR Koubia	RR Tougué
April-July			
20 emissions	31 emissions	41 emissions	22 emissions
August - November			
56 emissions	58 emissions	55 emissions	56 emissions

\*A total of 364 all programmes combined.

#### Development of an environmental education program: Club P.A.N. (PA - R5A.A5 et A6)

The planning of the Club P.A.N. (People - Animals - Nature) 2019/2020 training for the next school year has been finalised. 8 villages are currently involved in the process (Kalinko, Keyla, Gagnakaly, Fello-Kollet, Kounet, Daara, Laffa-Boubé and Kouratongo), and we are discussing the possibility of including the village in the network of villages included in the Club P.A.N. for this school year.

Club P.A.N. has been active for 4 school years, with about 608 children participating. 14 participants (coordinators, teachers and school directors) were trained in November 2018 during a four-day workshop in Labé. We organized 11 conservation education sessions in each school and completed before and after assessments for 80 children (10 per school).



**Figure 38.** Example of awareness panels in the park (above); community awareness with the 3rd theatre campaign in the park (below)

Parents' Day brought together 3298 people from these communities. All of them mentioned their recognition of the program, and their better knowledge of animals, forests and nature through their children.

This evaluation shows that thanks to CLUB P.A.N, children have increased their knowledge by 38% on average, and 99% of them already want to stop eating bushmeat. Furthermore, it has helped to further increase the understanding of the issues at stake in the Middle Bafing National Park with 99% of the children wanting a better protection of the park's values.

The planning and training of 17 PAN club teachers and supervisors for the implementation of the new 2019-2020 season was carried out in Labé this year (Figure 39).



**Figure 39.** Club PAN team with supervisors and teachers

## 5. Community Training Plan

- ❖ **Objective:** Raise awareness and train community members to understand the environmental management techniques, territorial planning and shared governance, environmental and habitat restoration, and agro-ecology available to meet project and community demands;
- ❖ **Results:** The environmental emergency situation with the increasing lack of water, declining soil productivity and the high level of deforestation and bush fires, forced us to begin implementing this plan in order to respond to the most urgent needs in these areas.

## Restore forest cover and ecosystem functioning in key areas (PA -R1F.A1)

The evolution of forest cover, ecological connectivity overlaid with areas of high conservation value in order to observe in which category of conservation value the "gained" or "lost" areas of forest fall.

In the example of Laffa Boubé described below (Figure 40), we can see that within the areas of highest conservation value there are both areas of cleared forest and areas of regenerated forest. It is therefore difficult at the moment to draw any conclusions from these elements, and they should be in line with our priority protection strategy.

If we now look at the areas of connectivity breaks that had been identified by the environment unit and the mapping cell (in 2018 images, remember), we realize that the vast majority of these breaks overlap with areas without forest (neither gained, lost, nor persisted) (Figure 41). In fact, the rupture zones are often older than 2017, the reference date for this diachronic analysis.

It should be noted, however, that some breaks sometimes overlap with areas of forest lost in 2019 and conversely (but more rarely) with areas of regeneration.

Finally, on the increase or decrease in connectivity, the analysis of the map of forest cover change between 2017 and 2019 (see below) shows that areas of forest clearing strongly decrease connectivity, forming important breaks in ecological corridors.

As for regeneration areas, they do not seem to work significantly towards increasing connectivity. Indeed, regeneration appears, most of the time, scattered and residual in the periphery of already existing forest massifs. Hence the need for an integrated strategy that acts on priority sites, i.e. HCV areas.

Nevertheless, we do notice an increase in connectivity in some places, and from this example we can see some analysis, such as:

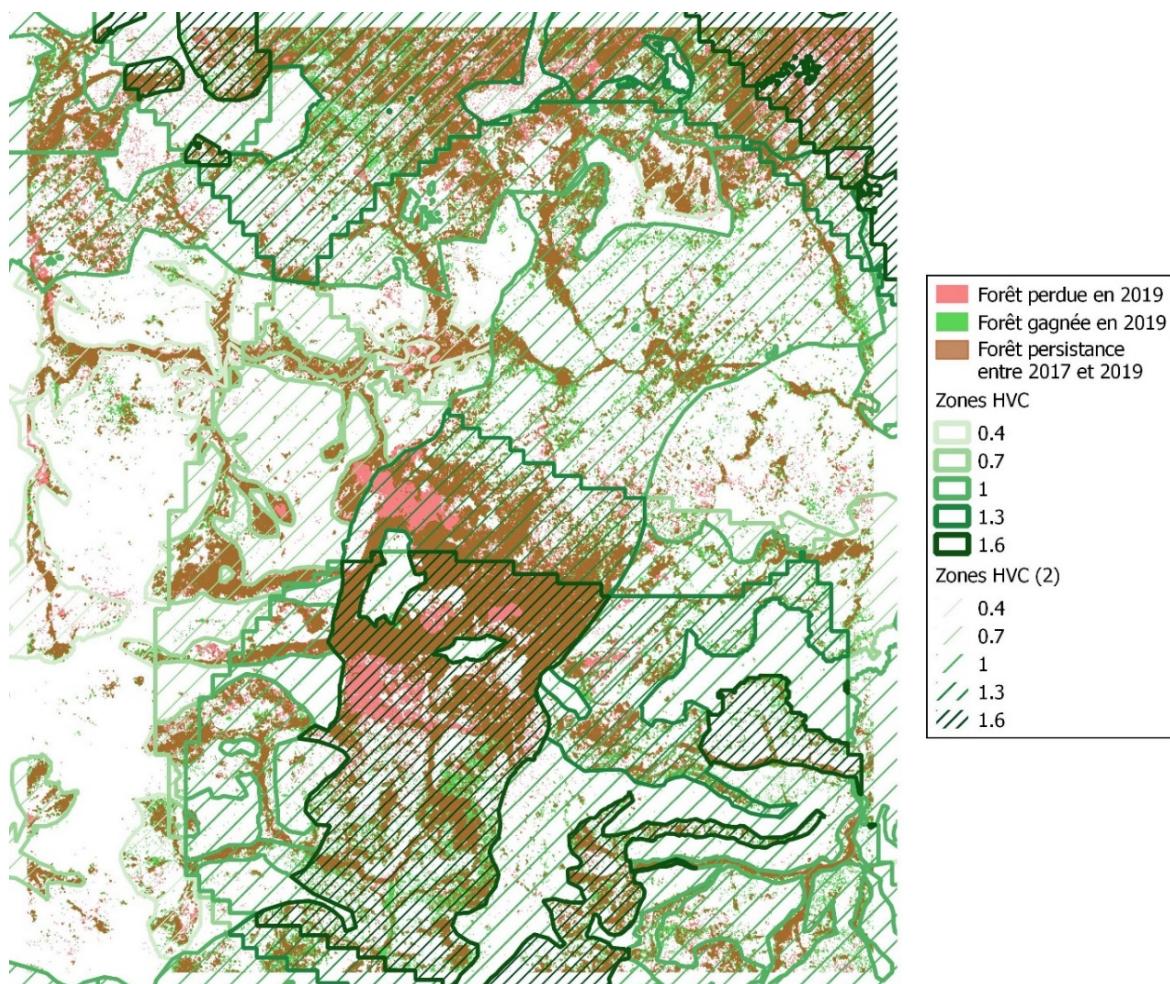
- ❖ As the area figures show, the forest increased slightly in the study area between 2017 and 2019 (+2.35 km<sup>2</sup> or +7% compared to 2019);
- ❖ The observed increase in forest area may be due to natural regeneration thanks to a milder meteorology for the vegetation, but also due to a certain imprecision in the semi-automatic classification of habitats that should not be overlooked.

For example, considerable areas of clearing are clearly visible in an immediate area around the village of Laffa (Figure 42).

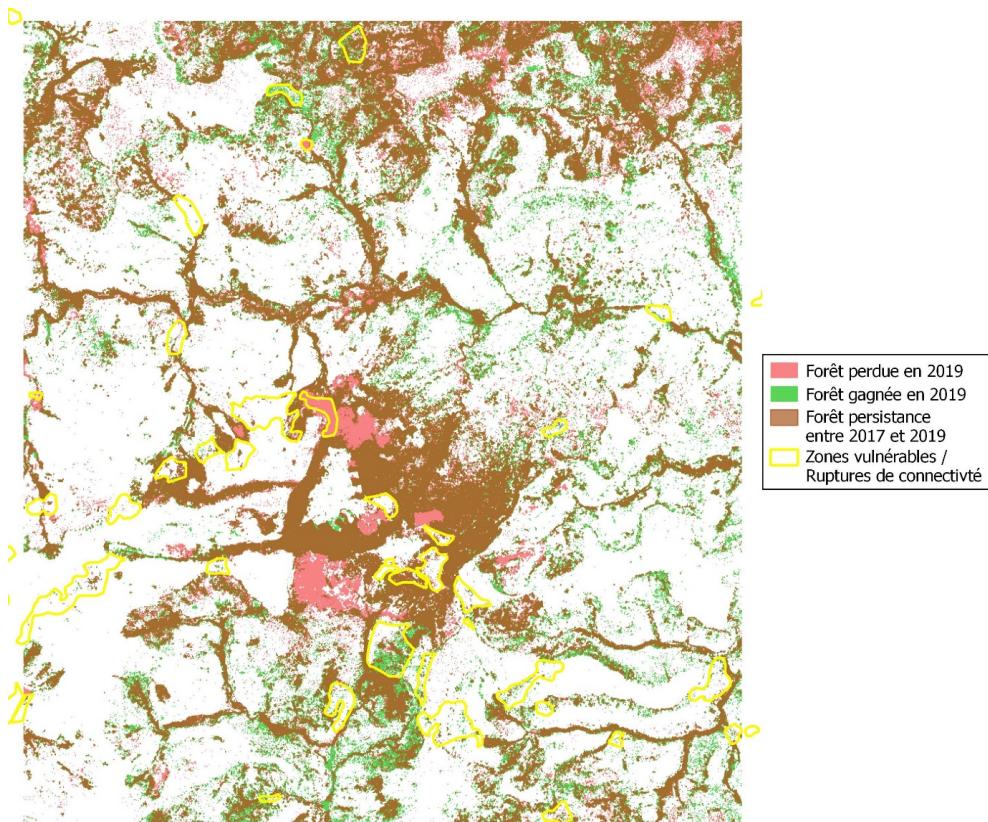
Overlaying this information and findings of degraded and reclaimed areas with the vulnerable HCV areas and connectivity breaks will allow an assessment of the loss of connectivity as shown in the figures below (Figure 43). We will then focus on these areas of importance.

To summarise all these analyses, and for the Laafa Boubé zone, we can look at the different areas of forest lost or gained in 2019 in the table below (note that these calculations are based on treatments carried out on sieved files):

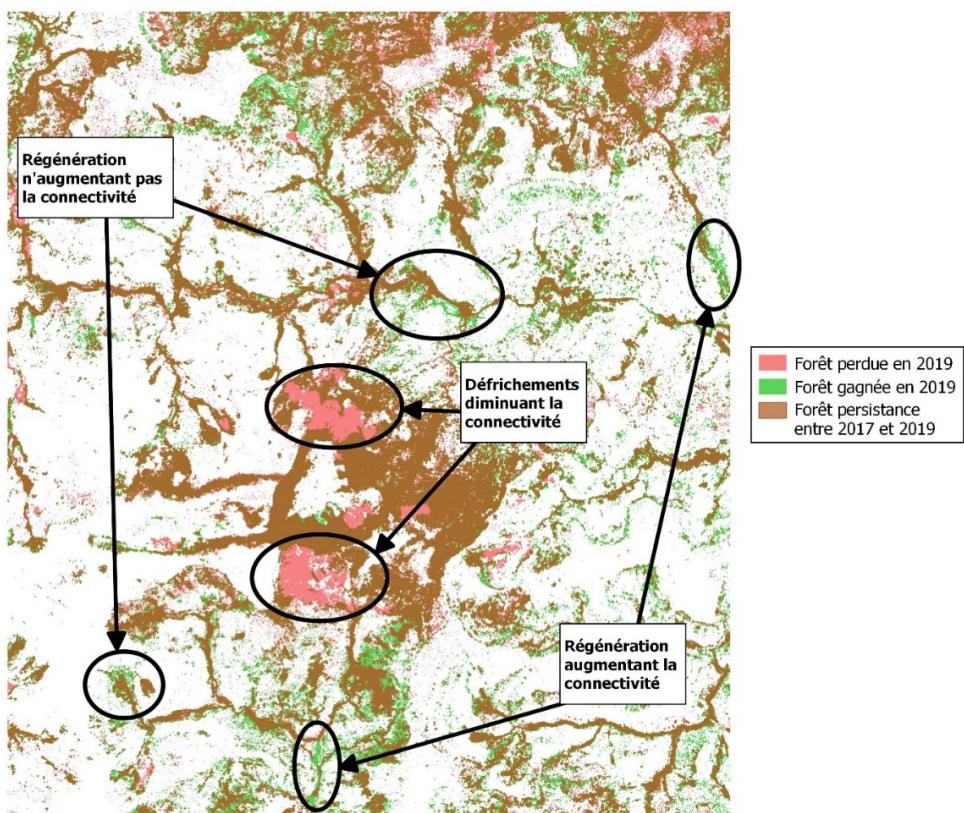
	Forest cover loss in 2019	Forest covered gained in 2019	Difference
Total area (km <sup>2</sup> )	4,9	9,2	+ 4,3 km <sup>2</sup>
Surface area required to re-establish connectivity	0,223	0,395	+ 0,172 km <sup>2</sup>
within the HVCs (>1)	4,8	8,3	+ 3,5 km <sup>2</sup>



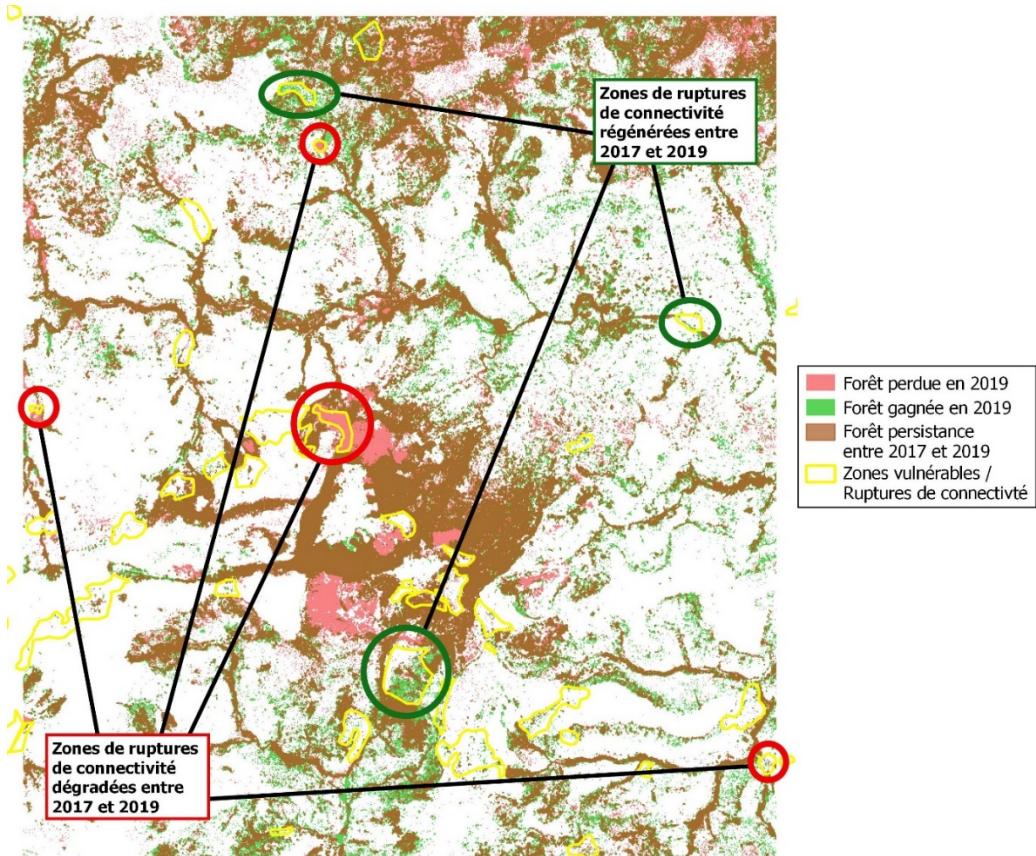
**Figure 40.** Map illustrating the overlay of HCV zones and the evolution of forest cover between 2017 and 2019



**Figure 41.** Map illustrating the overlay of identified connectivity breaks and the evolution of forest cover between 2017 and 2019



**Figure 42.** Map presenting the connectivity analysis on forest cover change between 2017 and 2019



**Figure 43.** Map presenting the connectivity analysis on the evolution of forest cover between 2017 and 2019 according to the identified areas of connectivity breakage

#### Tree Nurseries (PA - R1F.A2 et A3)

For the tree nurseries, for the year 2019, a total of 5 additional nurseries have been installed, which completes the number to 6 of the nurseries in the NMBP. Seven plant species were introduced in the various nurseries with a total of 102,000 individuals, divided into 20,000 each, with the exception of the Laffa nursery, which was used to enrich the reforestation sites and now houses 2,000 plants. 45 rolls of wire mesh were used to secure the 5 nurseries, i.e. 9 rolls per nursery site, as well as equipment for watering the plants. 60 people in six villages of the PNMB (Laffa, Kalinko Missira, Foungani, Balabory, Sangan, and Koulifakara) of which 25 women and 35 men are trained in the techniques of setting up and monitoring the nurseries.

Five nurseries have been installed in the pilot villages of Kalinko Missira, Foungani, Balabory, Sangan and Koulifakara. This brings a total of 6 nurseries in addition to the Laffa nursery. The installation work of the nurseries consisted of cleaning, preparation of the flowerbeds, preparation of potting soil, filling of the bags and securing the sites with grids against herbivores. In addition, 1725 seedlings from the Laffa nursery were used in 2018 for the reforestation of the sites.

For the year 2019, a total of 20,000 sachets per site were prepared for filling with potting soil before sowing. However, some sachets were sketched before filling. This situation did not allow in some cases to reach the planned number (20,000 bags) during a mission. However, other missions were organised to carry out the refilling. In Kalinko Missira, for example, of the 16,000 bags available, 15,898 good quality bags were filled and graded, with a loss of 102 registered bags due to poor design from the factory. Of the quantity of bags filled, 9,984 bags were sown during the Mission with 5914 bags not sown (Table 20). The nursery management team that has been established has been tasked to continue seeding the remaining packets.

Thus, at each site, local tree species were planted in the filled packets (Table 21). In the Laffa nursery, a replanting of 2000 seedlings was carried out. Following the refilling of the nursery, the current total number of seedlings is 8,500. At present, the Laffa nursery is almost empty due to the recent enrichment activities.

**Table 20.** Condition of packets, filling and sowing of seeds in the nursery

SITES	Status of Nursery				
	Available	Good Cond.	Filled	Planted	Planted later
<b>KALINKO MISSIRA</b>	16 000	15 898	15 898	9 984	5914
<b>FOUNGANI</b>	16 000	16 000	15 193	14 218	807
<b>BALABORY</b>	16 000	16 000	16 000	16 000	0
<b>LAFFA</b>					

**Table 21.** Tree species planted at the 3 sites in the 6 nurseries established in the MBNP

Tree species	Balabory	Foungani	Laffa	Kalinko	Koulifakara	Sangan	Total
<i>Afzelia africana</i>	7060	6400	2000	3344		1354	20158
<i>Carapa isoerlia</i>		180					180
<i>Carapa procera</i>	20						20
<i>Daniellia oliveri</i>		356		1568			1924
<i>Diospiros messipiliformis</i>	900	752		824			2476
<i>Erythrophleum guineensis</i>		4000		1728			5728
<i>Harrungana madagascariensis</i>	900	2500					3400
<i>Khaya senegalensis</i>		30					30
<i>Parkia biglobosa</i>	4620	5026		5614		10923	26183
<i>Saba senegalensis</i>				824			824
<i>Tamarindus indica</i>				128			128
<i>Terminaria superba</i>	900					582	1482
<i>Vitellaria paradoxa</i>	4600			5970			10570
<i>Jatropha curcas</i>					14614		14614
<i>Andasonia digitata</i>	1000				2080	2723	5803
<i>Acacia sp</i>					3051	2514	5565
<i>Erytrina senegalensis</i>					255		255
<i>Gludicia sp</i>						1904	1904
<b>Total</b>	<b>20000</b>	<b>19244</b>	<b>2000</b>	<b>20000</b>	<b>20000</b>	<b>20000</b>	<b>101244</b>

In addition, 9 screens were installed at each site, for a total of 45 screens for the five villages to protect the nurseries from herbivores (Figure 44).

Following the work carried out in the three villages on the installation of the nurseries, a meeting was held to make the different nurseries available to the committee of the different communities in the targeted villages. During the different meeting sessions organized, 25 participants per village were identified, i.e. a total of 75 participants. On this occasion, a community meal was organized to illustrate and strengthen the bond of friendship and collaboration between the community (committee) and the NMBP creation project. (see photo, Figure 45)



**Figure 44.** Installation of fencing



**Figure 45.** Meeting to make nursery sites available to the committees of the villages concerned

Develop agreements on the process of reforestation on degraded forest landscapes (PA - R1F.A2, A3, A4)

- 65 ha in the classified Bakoun Forest are under natural ecological regeneration (NER), have also been protected against bush fires by the establishment of 15 m wide firebreaks around them (Figure 46);
- In addition to the 65 ha in August, additional sites have been identified with an area of 30 ha, making a total area of 95 ha. In December, all 95 ha were cleared, of which 90/95 ha were cleared, representing a 95% rate of progress;
- More than 200 people, mainly women and men from the communities, were involved in the implementation of the RNE works;
- 223 plots are installed on 30 ha in the Sotirey Dow site and 5 plots inventoried with different information (height and diameter);
- Each plant or individual is materialized by the stakes in the beds;
- A total of 1059 individuals have been inventoried which is equivalent to a total of 1059 posts.



**Figure 46.** RNE site at Sotirey Dow after clean-up (top); bush firewall around Sotiré RNE area (bottom)

## Definition and implementation of an agroecological development strategy (PA - R2B.A2)

### ❖ Promotion and valorisation of alternative activities and value chains

As part of the identification of value chains and value chains of importance in the localities of the PNMB, 3 series of surveys were carried out in the first 7 pilot villages, namely: Sangan, Lallabara, Koulifakara, Laffa Boubhé, Kalinko Konkero, Kalinko Missira and Foungani.

These surveys have focused in particular on:

- Type 1 survey: gathering information from local elites concerning the channels and VCAs present in the villages;
- Type 2 survey: identification of the groups present in the localities;
- Type 3 survey: gathering information from men and women aged around 45 years and vulnerable people for the identification and prioritization of channels and VCT.

**Table 22.** Summary of priority value chains and value chains First 7 pilot villages of the MBNP

Alternative Activities	
1. Fonio 2. Sorghum 3. Rice 4. Market gardening (okra, eggplant, tomato and onions, etc.)	5. Cattle 6. Goats 7. Chickens 8. Honey 9. Shea butter 10. Néré 11. Fishing

### ❖ The structuring of communities into cooperatives

In order to facilitate the promotion of the identified value chains, the setting up of clusters in the pilot villages has been initiated. This implementation will be done in stages and according to the needs of the populations, depending on speculation and objectives. For the time being, a first phase of awareness raising on the creation of groups has been carried out, explaining the objectives of the group, the concept, its organization and functioning. 390 people have been sensitized, 64% of whom are women in the localities of Sangan, Koulifakara, Lallabara, Laffa Boubhé, Kalinko Konkero, Kalinko Missira, Foungani, Dara, Dakaciré and Yalagueta. (Figure 47)



**Figure 47.** Training on the creation of GIEs in Laffa Boubhé.

## ❖ Apiculture

As part of the promotion of the beekeeping sector, a partnership with FAPI-G (Federation of Guinean Beekeepers) in the form of a service contract worth 264 937 350 GNF was signed for the development of improved beekeeping and the production of honey and wax in 7 pilot villages. Awareness sessions on sustainable beekeeping were also organized in 5 other villages of the PNMB: Houdy, Kela, NDantaba, Madina 2 and Mareinfaya. A total of 389 people were sensitized.

In addition, a total of 35 beneficiaries including 14 women, i.e. 5 people per village, were identified for the promotion of sustainable beekeeping in these localities. 175 Kenyan beehives and hive stands, 35 smokehouses, frame lifters, pairs of gloves and boots and protective clothing were provided to the beneficiaries, organized in groups and trained in the techniques of running and maintaining the apiary (87 people in total), as well as in drawing up the statutes and internal regulations of a group and in simplified management and accounting techniques. Currently, following training and regular monitoring, 38 out of 175 hives are inhabited (Table 23, Figure 48).

**Table 23.** Hive habituation rate in the MBNP

Location	Nb. of active hives	Activity rate
Laffa Boubhé	4	16%
Lallabara	12	48%
Koulifakara	4	16%
Sangan	1	4%
Foungani	1	4%
Kalinko Missira	5	20%
Kalinko Konkero	7	28%
<b>TOTAL</b>	<b>38</b>	<b>22%</b>



**Figure 48.** Maintenance of a hive in Koulifakara and brood training in Kalinko Konkero

### ❖ Shea Butter

In order to promote the shea industry, a meeting was held with a potential partner COPRAKAM (Cooperative of Peanut, Shea and Honey Producers) in Dabola. Created in 2009, it has 131 groups for 4094 members, including 2537 women, and ensures the processing focused on added value and marketing. The objective is to establish a partnership with the structure for the training of groups of shea butter producers in improved production techniques and the use of processing machines as well as specifications for the sale of butter directly to the structure, the latter benefiting from orders from France by the company OKA France Cosmetics.

### ❖ Vegetable gardening

As part of the promotion of the market gardening sector, support was provided for the production aspect with a view to ensuring household food diversification. 118 people have been trained in the production of solid compost in the first 7 pilot villages, carried out by the former beneficiaries themselves with the support of the activity managers. In order to facilitate this activity, 10 shovels and 10 forks were provided per village. In these same villages, 250 people were trained in soil preparation, direct seeding, pot sowing, transplanting and market gardening techniques (Figures 49-50).

In order to diversify crops, 800 g of carrot seed was provided for the 7 villages, 145 kg of DPS bean seed (25 kg per village) and 400 g of cabbage seed in the same 7 villages and in Kela, in exchange for an agreement to defend the banks of the watercourses over 2 metres. A total of 35 women in 5 women/village were trained in the potato planting technique and each received 1 kg of potato seed (Figures 51-52).

In addition, based on the needs identified, 371 people were trained in the preparation of garlic, ginger and chilli biopesticide (Figure 57) in the first 7 pilot villages and in the localities of Dara, Dakaciré, Kela, Madina 2 and Mareinfaya. In order to encourage the production of biopesticides, 40 kg of ginger seeds for the 7 villages were given to the training participants as well as 20 kg of garlic seeds in these same villages and in Kela. In addition to this training, the first 7 villages benefited from the training on the preparation of biological fungicide based on papaya leaves, i.e. 119 people including 118 women (Figures 53-55).

In order to enhance the value of market gardening production in a context of food insecurity, food diversification was promoted in the 7 villages mentioned above. Surveys and training courses on the culinary preparation of carrot-based supplementary food for young children were organized and mobilized a total of 221 people, including 217 women (Figures 56-58).

In addition, in order to be able to use market garden production over a longer period, theoretical training on the preservation of vegetables in jars was also conducted in the same villages, mobilizing 95 women.



**Figure 49.** Transplant training in Sangan.



**Figure 50.** Sowing formation in Sangan



**Figure 51.** Preparation of beans for sowing in Sangan



**Figure 52.** Potato seeds for sowing in Kalinko Missira.



**Figure 53.** Preparation of garlic, ginger and chilli biopesticide at Kalinko Missira



**Figure 54.** Biopesticide training at Kalinko Missira



**Figure 55.** Preparation of FounGANI fungicide



**Figure 56.** Q&A session with parents



**Figure 57.** Culinary preparation training session



**Figure 58.** Nutrition training

## Assisted Natural Regeneration Pilot Project with Leading Farmers (PA - R2B.A8)

As part of the implementation of 1) the 2018-2020 Action Plan, including the involvement of communities in the conservation of natural resources in the NMBP and 2) DARWIN funding, particularly the restoration of natural ecosystem functions in the area, a pilot project to support rural development has been initiated by WCF and OGPR. This project supports the introduction of Assisted Natural Regeneration (ANR) in the current agricultural systems in the conversion towards innovative and less environmentally impacting systems. Two districts in which 6 pilot villages have been selected. Then, 12 leading farmers from these districts, 2 from each village.

In order to succeed in this challenge, the WCF wants to promote a participatory approach to ensure the sustainable commitment of these leading farmers. Thus, participatory agricultural diagnostics were carried out at the scale of the six pilot villages and the farms of the twelve leading farmers in order to describe their production systems, to describe the initial situation and to identify possible innovative solutions. The lead farmers were then used as examples for other members of the community regarding the introduction of new techniques and management of their farms. They are currently able together with the WCF-agents to organize extension sessions for other interested community members in order to extend the system with the agreements of the VGMPs. Indeed, these innovations are linked to the validation of the rules of exploitation of natural resources for each zone of the NMP.

In relation to this point, training and sensitization sessions have been conducted and the 12 Peasant Leaders have been sensitized and trained on different themes such as: the principles of agro-ecology and agroforestry, the establishment of quickset hedges, mulching techniques and the erection of stone barriers (Figure 59-60). In addition, Leaders were provided with gloves, boots, raincoats, machetes and picks to facilitate their work. It should be noted that the trained Peasant Leaders were in turn able to sensitize 254 people in the first 6 pilot villages.

In order to evaluate the RNA/RNE activities in the 6 villages where the promotion of these practices was carried out, a consultant was hired and recommendations were produced. At the end of the first season of implementation of the Assisted Natural Regeneration pilot project, the evaluation carried out indicates that out of the 12 peasant leaders identified by the communities, 9/12 have actually practiced RNA, 3/12 have not tried at all, and 2/12 emerge as champions in RNA, specifically Mamadou Oury DIALLO of Bossiko Dow and Bailo TRAORE of Foungany (Figure 61).

At the end of this evaluation and in order to implement the practice in all pilot villages, an exploratory exchange mission on RNA/RNE took place in Mali (Bamako and Kolokani) in December 2019. Table 24 summarizes the main lessons learned in each of the project's pilot RNA sites.

In other villages such as Kela, Missira Djallonké, Mougne Dow, Mareinfaya, Madina 2, Dara, Dakaciré, Yalagueta, Balabory, Idia and Ley Kimbeli, 535 people were sensitized on agro-ecological practices (crop associations and rotations, use of stone coordinates, production and use of compost, production and use of bio-pesticides, etc.).



**Figure 59.** Training on anti-erosion in Lallabara.



**Figure 60.** Awareness raising on agroecology by Farm Leaders in Lallabara.

Training on rainfed crop association techniques was also provided to 360 people in the 7 pilot villages as well as in Dara, Dakaciré and Balabory. In order to put into practice the techniques learnt, 13 kg of Cajanus cajan seeds were provided for each village.

Another important activity of this first quarter was the launch of work on community infrastructure. Table 25 below shows the projects currently underway.

Within the framework of Community Development activities, the construction of 11 community infrastructures was started in 2019 in 9 pilot villages of the PNMB. Work is in progress and will be completed by the first quarter of 2020 at the latest (e.g. Figure 61).

As an example, the characterization of 17 ha of the Lallabara plain in order to put this 2800 m perimeter into operation is a flagship project for negotiation with the committee on zoning and compliance with natural resource use guidelines (Figure 62).



**Figure 61.** Left-Mamadou Oury Diallo (Bossiko Dow), Right- Traore Bailo (Foungany)





**Figure 62.** Left- Meeting between the WorldVision Mali and PNMB teams in Bamako and Right Visit of an RNA field in Ouediedio in the Kolokani circle with the Eco-agri team in the Sahel

**Table 24.** Summary of RNA sites in the six (6) pilot villages

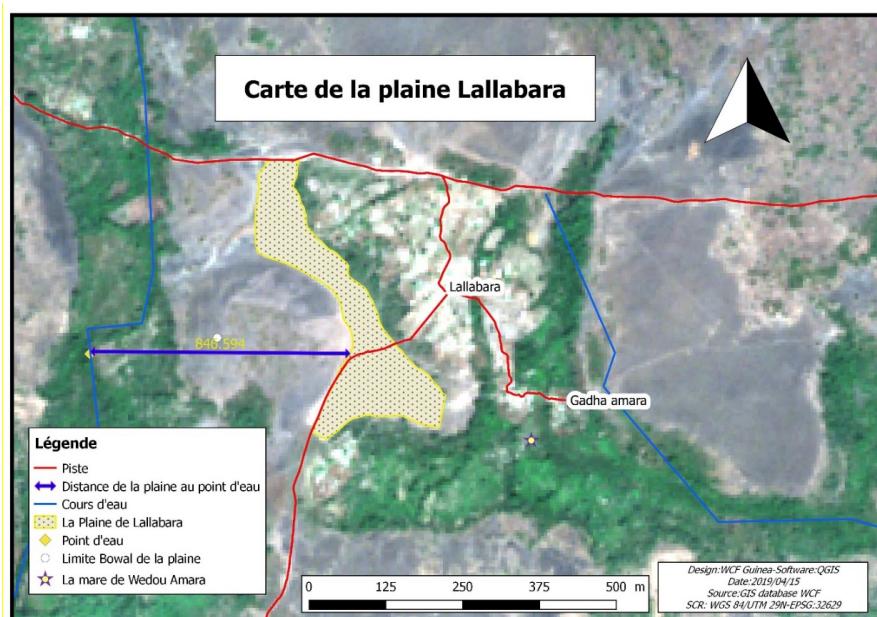
Village	Name of Farming leader	Monitoring 2019	Observations
Sangan	Daouda Mara	✓	<i>Successfully tested, but still needs to be fully convinced about RNA</i>
	Mamadou Oury Diallo	✓	<i>Successfully tested and has already achieved positive results</i>
Lallabala	Fatoumata Bailo Balde	✓	<i>Pilot project, but crops were planted late due to disease.</i>
	Oumar Sow	✓	
Kouli Fakhara	Mamadou Daidou Keita	✗	<i>Did not perform RNA. Instead, he burned down the farm</i>
	Ibrahima Balde	✗	<i>Did not perform RNA and was not available to explain his reasons.</i>
Kalinko Konkero	Mamadou Camara	✓	<i>Successfully tested, but still needs to be fully convinced of the model</i>
	Ali Kokoun Camara	✗	<i>Didn't attempt the RNA because of the disease</i>
Kalinko Missira	Ousmane Camara	✓	<i>Successfully tested, but has yet to be fully convinced</i>
	Oumar Bangoure	✓	<i>Successfully tested, but experimental plots did not yield conclusive results.</i>
Foungany	Traore Bailo	✓	<i>Successfully tested and has already achieved positive results</i>
	Conde Demba	✓	<i>A successful pilot project, but crops failed due to poor crop rotation</i>
Foungany	Traore Bailo	✓	<i>Successfully tested and has already achieved positive results</i>
	Conde Demba	✓	<i>A successful pilot project, but crops failed due to poor crop rotation</i>

**Table 25.** List of social infrastructures developed for the park's communities

Communes	Location	Project type	Construction company
Fello Koundoua	Nguessawoula,	Development Water source	ENICO GC
	Baridonde	Development of a water source and drilling of a borehole	○ ENICO GC (water source) ○ EDF (borehole)
	Fello Koundoua Centre	Development of a water source and drilling of a borehole	○ ENICO GC (water source) ○ EDF (borehole)
Dara	Dara	Rehabilitation of a well	EDF
	Bellakoure	Construction of market pavillion	EGB
Kouratongo	Laffa Boubhe	Construction of a honey storage warehouse	ENICO GC
	Lallabara	Fencing of a 17 ha plain	ENGUCOB-TP
Gagnakaly	Kalinko Konkero	Drilling a borehole	EDF
Kansangui	Ley Kimbeli	Drilling a borehole	EDF



**Figure 63.** Construction work on Bellakouré market (right); fence-laying work on Lallabara plain (right)



**Figure 64.** Map locating the Lallabara plain and the permanent water source Gadha amar

Measures relating to the populations settled in the fully protected area of the MBNP developed and validated by stakeholders (PA - R2C)

Two specific reconnaissance missions have been planned specifically for the end of 2019 on this subject. It follows on from the work on CARTO 2 participatory mapping initiated in the 26 "localities" (only 11 are officially recognised). It will mainly involve organising the definition of an adapted methodology, and the option of developing a partnership with INSUCO for the social strand by 2020 seems to us to be a credible option. Indeed, it is advisable to also have an actor external to the current management structure to identify the best options per site. It will also be a question of using the international standards linked to the drafting of the Income Maintenance Plan (IMP).

All these elements will be part of the EISE planned for later in 2020.

In addition, we have started regular monitoring of targeted households to quantify the evolution of their natural resource use practices as park management becomes more effective, as well as the profile of their income sources (Table 26). This monitoring is being strengthened with the arrival of a scientific advisor, Vittoria Estienne.

We will also seek to define an indicator linked to the education of the children of these households, the impact of the pan club being monitored on a larger number of people.

**Table 26.** Average income of households surveyed in 2019 and those regularly monitored to test the level of appropriation of the training given on agroecological models and their income profiles.

**Revenu moyen par ménage dans les 7 villages pilotes issus des enquêtes et ceux suivis régulièrement**

Villages	Nombre total de ménages enquêtés	Revenu moyen / ménage / an	Nombre de ménages suivis/villages	Revenu moyen/village/5 ménages
<b>Foungani</b>	16	2.400.000	5	4.534.000
<b>Kalinko Konkero</b>	24	2.360.000	5	2.877.200
<b>Kalinko Missira</b>	15	2.340.000	5	3.178.800
<b>Koulifakara</b>	17	2.330.000	5	1.890.000
<b>Laffa Boubhe</b>	11	2.490.000	5	1.908.000
<b>Lallabara</b>	10	2.580.000	5	3.187.000
<b>Sangan</b>	12	2.540.000	5	2.839.000
<b>Total</b>	<b>105</b>	<b>2.434.286</b>	<b>35</b>	<b>2.916.286</b>

## 6. Training plan for the OGPR

- ❖ **Objective:** Train the members of the Office Guinéen des Parcs et Réserves (OGPR) in modern management and good governance of a national park
- ❖ **Results:** The training plan of the OGPR is carried out at 2 complementary levels, on the one hand the general management in Conakry and on the other hand the OGPR agents in the field integrated in the WCF teams. A large part of our training is therefore continuous and has OGPR officers have been seconded to WCF teams in the management activities of the NMP. This is an ongoing process and already 20 PBMC officers are active.

## MPNP Enforcement and Monitoring System (PA - R1D)

A draft monitoring strategy (involving the communities and their committees) and anti-poaching actions (involving a special mandated unit) are being developed with the services of the OGPR. It has been developed on the basis of international standards (IUCN, IRF, etc.) and Guinean operational procedures, with UNOPS support. However, it deserves to be reviewed in 2020 in the light of our better understanding of the context of the specific realities of the NMBP.

In addition, a collaboration has been signed with the GALF project, implemented by the NGO WARA, to provide specific support for the training of agents who will be mandated for the NMBP as well as for the monitoring of trafficking in protected species in the region. Convincing results have already been achieved and will be described at the end of the procedures initiated. This is obviously so as not to have a negative effect on their resolution. These are proximity investigations and monitoring of the criminal proceedings initiated on the most important cases. To date, two criminal proceedings are under way in Labé and Mamou. Both cases have been arrested in the middle of fencing the skins of protected species.

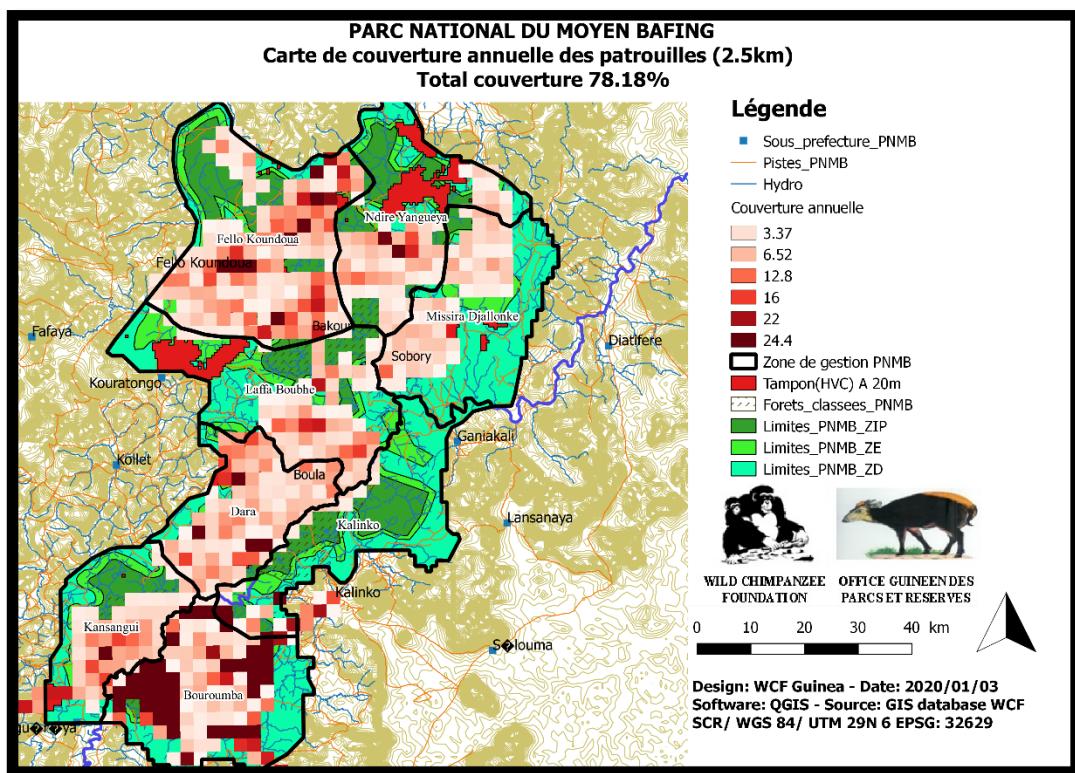
Since then, a training session for magistrates has been held in collaboration with this NGO for the main courts around the PNMB, namely Labé, Mamou and Dabola.

In any case, during 2019, 35 eco-guards were recruited, trained and deployed for surveillance. This recruitment of eco-guards took place in three (3) phases in the year 2019 starting from the second: 12 people (8 eco-guards and 4 Animators), 12 people (8 eco-guards and 4 Animators) for phase 2 and 28 (20 eco-guards and 8 Animators) were recruited. He noted that the eco-guards and facilitators receive the same training modules. In addition, the group resigned, bringing the total number to 35 instead of 36.

During 2019, mixed teams (Eco Guards and OGPR/MEEF) patrolled 892/1141 grids of 2.5 km quadrant covering the management zones of Bouroumba, Dara, Laffa Boubhè, Kansangui, Kela, Ndire Yangueya, and Fello Koundoua to monitor and record all observations of fauna, flora, and illegal activities and support the early fire setting and management teams. A coverage rate of 78.18% was achieved in 12 monitoring missions (24 patrols) in the above-mentioned management zones. The teams travelled a total distance of 4188.47 km in Middle Bafing National Park.

A total of 8267 direct and indirect observations of fauna, flora and illegal human activities were made. In addition, 7048 wild animals were observed directly and indirectly including 2209 chimpanzees, 07 on the lion, 37 on the hippopotamus, 12 on the panther, 61 on the buffalo, and 2825 on the warthog.

The main threats to the MBNP are agriculture, animal husbandry, hunting and honey extraction.



**Figure 65.** Grid of planned patrols in the management zones of Middle Bafing National Park for the year 2019

### Implementing a Social and Environmental Impact Assessment study (EISE) (PA - R6A.A1)

The steps required to validate an EISE study in Guinea are complex and are described in several rules of procedure and regulations. With the support of the INSUCO national office, a preliminary review of the administrative and legal standards and requirements applicable to the project and the EISE was conducted. A distinction is made between the Guinean regulatory framework and international standards (mainly from the International Finance Corporation - IFC/IFC). The Guinean laws governing scoping studies are defined in 2014 by decree of the Guinean Bureau of Environmental Studies and Assessment (BGEEE).

On the basis of this analysis, it appeared essential to comply with the documents required to launch the EISE itself. The Terms of Reference of the EISE are defined by two main documents: the stakeholder mobilization plan and the scoping report. These two documents are part of the EISE and are mandatory, both in international standards and in national legislation.

Thanks to this partnership with INSUCO, the stakeholder engagement plan was finalized and validated internally (OGPR and WCF) in 2018. The document is currently undergoing national validation by BGEEE. The validation of the EISE also requires a scoping report to describe the project, which is effective since early 2019 with the support of the INSUCO and Biotope offices. Similarly, the WCF has produced many specific strategies and approaches that are structured responses to the impacts that will certainly be described in this study.

The precise evaluation of the negative impacts on local populations related to the limitation of the use of natural resources in 26 villages included in the ZIP will be carried out through a first specific study in the second half of 2019.

The Dutch Commission for Environmental Assessment has also proposed to finance for 2020 the accompaniment of a Strategic Environmental Study (SEA) to the MEEF in order to study the cumulative impact of the various projects envisaged in the Bafing area (PNMB, UNDP Bafing Faleme, Koukoutamba Dam and the planned micro-dams, high voltage lines, mines and roads, etc.).

#### **Establish the Middle Bafing National Park Management Unit (PA - R6B.A1)**

With respect to the terms of a potential public-private partnership (PPP) for the delegation of the management of the NMBP, legal advice has been provided since 2018 by NIMBA Consult. He stressed that there were no legal obstacles to such a mechanism for the management of a protected area in Guinea and that this document provides the necessary elements for the constitution of a first draft document.

Thus, a draft management delegation contract has been proposed and discussed with the OGPR and the MEEF during this year 2019, and it details the institutional modalities of operation and collaboration with the contracting authority. The structure of the Management Unit, the Monitoring and Governance Committee and the Audit Committee are included in the document.

A proposed organization chart has been presented to the Cabinet of the MEEF so that we can begin meetings with the other Ministries involved in the signing of the park management delegation contract in 2020.

#### **Strengthen the capacities of the Directorate General of the OGPR and accompany them in their mandates (PA - R6B.A2)**

On the basis of the validation of the terms of specifications defining the working methods with the OGPR (in the fleet and at General Management), the deployment of mixed teams has begun. Thus, nearly 20 OGPR agents are permanently collaborating with the WCF for the creation of the park. Refresher training is provided for each intervention and support in the field is provided by our technical teams. In addition, trainee agents from the Badiar and Haut Niger NPs are regularly incorporated into the Environment Department.

In addition, the WCF is committed to providing since 2018 the Directorate General with equipment enabling it to assume its role in the exercise of the responsibilities entrusted to it in the framework of the project for the creation of the national park. A 4x4 vehicle has been provided, about 10 computers, printers and photocopiers, as well as field equipment such as GPS or binoculars. Support for the operation of the structure within the framework of the project is also foreseen with the provision of office consumables and means of communication. For the second half of the year, it is planned to provide office furniture in order to ensure a working environment conducive to OGPR executives to better follow the NMBP creation process and offset printing.

The demand from the OGPR for advanced and continuous training is very strong and at the same time the number of OGPR agents made available and integrated into our teams is increasing regularly.

From a single element in early 2018, 17 OGPR agents and at least 12 deconcentrated MEEF agents are currently deployed in the field, coming from Conakry or other Protected Areas such as PN Badiar, PN Haut-Niger, and Ziama. No less than 6 executives from the Directorate General have participated in specific actions in the field. OGPR agents in the field show a high level of involvement and enthusiasm to acquire specialized knowledge in the management of a protected area. OGPR agents participated effectively in our wildlife monitoring, bird identification, participatory mapping of village territories, RNA diagnosis, botanical inventory programs.

These trainings are at the heart of our approach to capacity building of the OGPR in the sense that we base our selection and evaluation of staff on the modules they have received individually or collectively. In this way, over a given period of time, we can ensure that the integrated staff meets the needs of the project in order to achieve the expected results.

Furthermore, the Public-Private Partnership approach as promoted in Africa for the management of Protected Areas implies this dimension of training of dedicated State agents. This is so that at the end of the contract, the best management practices and standards are appropriated by the latter so that the level of efficiency of the management of the Protected Area does not suffer.

This collaboration between a national agency and an NGO is perceived in the country as exemplary, and even international donors intervening in Guinea rely on our management approach. In addition, we have developed a strong collaboration with other stakeholders in the OGPR, including UNOPS, the EU, the US and UK embassies, the NGOs FFI and JGI, or the CCC which also works in favour of PA management in Guinea.

The next steps coincide with the integration of the OGPR officers should be even more extensive. Indeed, certain aspects of management, such as the protection of the values of the PNMB are strictly devolved to them. A training plan is planned to be developed in 2020 for implementation.

**Write the development and management plan for the Middle Bafing National Park and the annual operational plan. (PA - R6B.A7 & A8)**

In drafting and validating the national park management plan, it is essential that we meet the required international standards. Therefore, the framework with 7 management objectives developed for the action plan (2018-2020) already follows the format of a park management plan according to these international standards.

In addition, we will work with the ongoing project implemented by UNOPS to provide OGPR with standardized management tools. As a result, collaboration has been established and, based on the management objectives defined in the MBNP Action Plan, UNOPS has standardized the framework for protected area management plans for OGPR. The first plan to be finalized is that for the Ziama Reserve. The Badiar NP is being produced and we will link the MBNP plan to this ongoing process. Thus, a series of consultations is still underway, and we should start working on the document with the experts of this project in 2020.

## 7. Evaluation of the implemented actions towards the achievement of results

### Establishment of a results-based monitoring and evaluation mechanism (PA - R6F.A1)

A joint unit of WCF and OGPR has been established and formalized to ensure the evaluation of the implementation of the activities of the Action Plan 2018-2020. It is a joint unit that will eventually be incorporated directly into the organizational chart of the management unit. It should logically be linked to the dedicated unit within the General Management of the OGPR which will centralize this Monitoring and Evaluation information for its entire network of Protected Areas.

We evaluated the quarterly operational plan in May, July, October 2019 and January 2020 for the defined management objectives. The May 2019 session also allowed to lay the foundations of the monitoring system with a dedicated training conducted by Commander Diarrassouba of the Ivorian Office of Parks and Reserves (OIPR) at the address of the OGPR and the WCF. Table 27 shows the results of the quarterly evaluation of the implementation of the Action Plan according to the methodology implemented in 2019.

It can legitimately be observed that the performance evolves positively from one quarter to the other, and that the deviations from the expected achievement demonstrate both that this project is ambitious within the time frame granted to it, and that the implementation of a good number of activities has only really started with the rainy season and the various meetings with stakeholders in June 2019. However, we note with satisfaction that the gap with the planning of the Action Plan, we are at 32% to achieve the expected results by the end of 2020. The Effective Achievement Rate (ERR), and the one showing the remaining rate, allow us to monitor this evolution.

Indeed, just as 2018 was a year of studies and analyses, 2019 saw the first concrete achievements for the benefit of the environment and communities. Thus, the selection and training of community ecoguards made it possible to record the first elements of regulatory monitoring, ensuring, together with the cantonment officers, better monitoring and protection of the NMBP. The 4th quarter saw the implementation of actions for bush fires and their management.

As regards management objectives 2 and 6, which suffer from delays in their achievement, the effect of the season and the intensification of reforestation, natural regeneration, defences, and agroecology activities in the last quarter of 2019 must be taken into account. Likewise, the organization of methodologies for approaching community issues for the management of territories and landscapes took time, as it was important to have a phase of advocacy and training of the populations of the PNMB, their administrative, customary and political authorities, as well as opinion leaders. The analysis of data by territory upstream and during discussions with the communities also took some time, and the first work was launched in the second half of 2019. Similarly, the establishment of Village Committees and Communal Assemblies, as well as the terms of the partnership with ANAFIC required additional legal support in order to be presented for validation for implementation at the end of the second quarter.

**Table 27.** Presentation of the status of completion of NMBP activities

Objectifs de gestion	TRIM 1			Planification	TRIM 2			Planification
	TRA	TRE	Ecart à la réalisation	TRE restant	TRA	TRE	Ecart à la réalisation	TRE restant
OS1	44,17%	24,44%	-44,65%	75,56%	62,98%	45,81%	-27,27%	54,19%
OS2	18,33%	13,17%	-28,18%	86,83%	38,73%	23,29%	-39,86%	76,71%
OS3	30,00%	15,45%	-48,50%	84,55%	56,08%	45,90%	-18,15%	54,10%
OS4	8,33%	2,78%	-66,67%	97,22%	44,44%	38,61%	-13,13%	61,39%
OS5	16,83%	16,67%	-0,99%	83,33%	48,38%	36,98%	-23,58%	63,03%
OS6	27,30%	28,30%	3,67%	71,70%	44,88%	42,62%	-5,03%	57,38%
OS7	0,00%	0,00%	0,00%	100,00%	61,46%	38,75%	-36,95%	61,25%
				Moyenne TRE restant				
				85,60%				
Objectifs de gestion	TRIM 3			Planification	TRIM 2			Planification
	TRA	TRE	Ecart à la réalisation	TRE restant	TRA	TRE	Ecart à la réalisation	TRE restant
OS1	78,97%	61,65%	-21,93%	38,35%	88,89%	69,05%	-22,32%	30,95%
OS2	56,19%	33,39%	-40,57%	66,61%	67,81%	44,94%	-33,73%	55,06%
OS3	79,33%	56,30%	-29,03%	43,70%	89,06%	69,06%	-22,46%	30,94%
OS4	54,31%	46,53%	-14,32%	53,47%	86,11%	69,17%	-19,68%	30,83%
OS5	53,65%	40,59%	-24,34%	59,41%	100,00%	90,50%	-9,50%	9,50%
OS6	63,06%	54,58%	-13,44%	45,42%	86,46%	58,40%	-32,45%	41,60%
OS7	62,50%	53,75%	-14,00%	46,25%	87,50%	75,50%	-13,71%	24,50%
				Moyenne TRE restant				
				50,46%				
				Moyenne TRE restant				
				31,91%				

