



AFoCO Project Document

Project code	AFoCO/024/2021
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Project Profile	
Project title	Conservation and development of forest ecosystems biodiversity resources at Cat Tien National Park
Project duration	Estimated start date: July 1 st 2021 Estimated end date: December, 31 th 2025
Implementing Agency	Cat Tien National Park
Participating country	Viet Nam
Project site	Cat Tien National Park and buffer zone of: (1) Tan Phu districts (Dong Nai province); (2) Cat Tien districts (Lam Dong province).
Main objective	<ol style="list-style-type: none"> 1. To improve knowledge and information sharing on biodiversity of forest ecosystems of the Park for local managers and policy makers. 2. To assess the climate change and social impacts on CTNP biodiversity and integrated management measures, improve management and conservation capacities of project stakeholders, and to engage local communities for forest management and protection. 3. To conduct piloting of models for sustainable livelihood improvement of communities in the buffer zones.
Target Area¹	Primary Target Area 2: Supporting research & development in climate change adaptation approaches Secondary Target Area 4: Local livelihood improvement & community-based small enterprise development
Budget and source of finance	Total: US\$ 1,232,000 - AFoCO: USD 1,132,000 - Viet Nam Government: USD 100,000
Proponent Profile	
Name/ Position	Pham Hong Luong Director
Organization	Cat Tien National Park
Address	Nam Cat Tien Commune, Tan Phu District, Dong Nai Province, Viet Nam
Contact	Tel: +84 2513 669273 Fax: +84 2513 669159 Email: luong.mard@gmail.com

¹ Refer to the list of target areas in accordance with the objectives and prevailing strategic plan of AFoCO (provided by the Secretariat)

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ABBREVIATIONS

Abbreviations	Full meaning
ABCD	Assets based Community Development
CBT	Community based Tourism
CPC	Commune People's Committee
CTNP	Cat Tien National Park
DARD	Department of Agriculture and Rural Development
DONRE	Department of Natural Resources and Environment
DOST	Department of Science and Technology
EBA	Endemic Bird Areas
FPD	Forest Protection Department
FU	Farmers' Union
HH	Household
IECA	Important Ecological Conservation Area
IUCN	International Union for Conservation of Nature
MAB	Man and the Biosphere Programme
MARD	Ministry of Agriculture and Rural Development
NGO	Non-Governmental Organizations
NP	National Park
NR	Nature Reserve
NTFP	Non-Timber Forest Products
PFES	Payments for Forest Environmental Services
PMU	Project Management Unit
PRA	Participatory Rural Appraisal
PSC	Project Steering Committee
Sps	Species
TO	Tour Operators
UNESCO	United Nations Educational Scientific and Cultural Organization
VLF	Village Livelihood Fund
VND	Viet Nam Dong
VNFOREST	Vietnam Administration of Forestry
WU	Women's Union
WWF	World Wide Fund For Nature
YU	Youth Union

SUMMARY

CTNP spans 82,597.3 hectares and is one of the Special-Use Forests of Vietnam, located in the 3 provinces of Dong Nai, Lam Dong and Binh Phuoc. It is a tropical rainforest with many rare and endemic flora and fauna species. It was established in 1992 based on the area of Nam Cat Tien NR (Dong Nai province) which has been protected since 1978, Cat Loc NR (Lam Dong province) protected since 1986 and Tay Cat Tien NR (Binh Phuoc province) protected since 1996. At present, CTNP is under the VNFOREST/MARD.

At present, due to human impacts and climate change, the biodiversity resources of CTNP are declining. In the last few years, CTNP and local authorities have collaborated to help local people to improve their livelihoods, strengthen forest patrolling, and develop commitment to the forest, but illegal logging, trapping, and snaring still occurs.

Some negative factors that lead to reduced biodiversity include:

1. Low literacy rates, low-awareness, and failure to observe the legal regulations on forest protection by local people, especially ethnic minorities. Therefore, they often impact forest resources.
2. Local people have low and precarious incomes and unstable jobs (unsecured livelihoods).
3. Due to climate change and social impacts, the exotic plant *Mimosa pigra* and floating vegetation have invaded park wetlands, and the Park lacks resources and solutions for effective control.
4. The capacity of biodiversity monitoring and forest protection of CTNP staffs is constrained.

Goal: To improve the conservation and development of forest ecosystems biodiversity resources at CTNP engaged with sustainable livelihood improvement for communities in the buffer zone.

Objectives:

1. To improve knowledge and information sharing on biodiversity of forest ecosystems of the Park for local managers and policy makers;
2. To assess the climate change and social impacts on CTNP biodiversity and integrated management measures, improve management and conservation capacities of project stakeholders, and to engage local communities for forest management and protection;
3. To conduct piloting of models for sustainable livelihood improvement of communities in the buffer zones

Solutions:

Objectives 1. To improve knowledge and information sharing on biodiversity of forest ecosystems of the Park for local managers and policy makers;

- Organize training, sharing knowledge, experiences and skills on biodiversity conservation to the Province, District, Commune Officers
- Study tour in national parks and protected areas inbound and outbound.

Objectives 2. To assess the climate change and social impacts on CTNP biodiversity and integrated management measures, improve management and conservation capacities of project stakeholders, and to engage local communities for forest management and protection;

- Assess the climate change and social impacts to the biodiversity of CTNP.
- Organize trainings on climate change and social impacts for people and local authorities in the buffer zone.
- Implement measures and solutions to minimize negative impacts of climate change and social

impacts at CTNP (i.e. improving the habitat of Ramsar-Crocodile Lake and neighboring wetland).

- Enhance local communities' capacity to adapt with climate change and social impacts (i.e. changing cultivation methods, practices for local people in buffer zone to adapt to climate change)
- Develop a model of planting Golden Camellia (*Camellia spp.*), Theaceae, which is an indigenous, rare and valuable tree used for timber, high quality drinks, medicine, and as an ornamental.
- Collect orchids (Orchidaceae) and set up a greenhouse for orchid genus resource conservation at CTNP.
- Develop supporting documents, materials and tools to improve conservation capacity.
- Organize training rangers in forest protection, biodiversity monitoring, patrolling, and management of violators.
- Develop coordination regulations on forest protection with local authorities and sign commitments on forest protection with households.

Objectives 3. To conduct piloting of models for sustainable livelihood improvement of communities in the buffer zones

- Survey and assess the benefits and potentials of economic development in the future of the Park and local community
- Identify economic benefits of biodiversity conservation engaged with improving livelihoods for local people in the buffer zone.
- Support the planting, maintenance, and marketing of high value tree crops to help improve the livelihoods of ethnic minorities in Village 3 and Village 4, Phuoc Cat 2 Commune, Cat Tien District, and Lam Dong Province
- Plan and establish intensive grassland management for ethnic minorities in Village 7, Dac Lua commune, Tan Phu district, Dong Nai province
- Develop and promote homestay model in Nam Cat Tien commune, Tan Phu district, Dong Nai province in accordance with local customs and practices as a tourism-based alternative livelihood

SECTION A. PROJECT CONTEXT

1. Background

CTNP has 82,597.3 hectares which were established under Decision No.08/CT dated January 13th, 1992 by the Vietnam Prime Minister and is made up of three parts.: 1) Nam Cat Tien Nature Reserve (Dong Nai province), established under Decision No. 360/TTg dated July 7th, 1978 by the Vietnam Prime Minister; 2) Cat Loc Nature Reserve (Lam Dong province), established under Decision No. 194/CT dated August 9, 1986 by the Prime Minister, and; 3) Tay Cat Tien Nature Reserve (Binh Phuoc province), protected since 1996. At present, CTNP belongs to the VNFOREST/MARD. CTNP is a "hot spot" of biodiversity, with many rare and endemic flora and fauna species. It is recognized as one of the 200 IECA of the World (WWF, 2001), one of 3 EBAs in Vietnam (Birdlife International, 1998), an International Biosphere Reserve (UNESCO/MAB, 2001, 2011), a Special National-Level Relic Site (2012) and includes a Ramsar Site at Crocodile Lake (2005).

CTNP has 4 main missions prescribed by Vietnamese Law: (1) Managing and conserving natural resources; (2) Scientific research; (3) Ecotourism development; (4) Cooperation with local authorities in buffer zone for community development. CTNP is one of the last remaining tropical lowland evergreen rainforests of Vietnam. The forest structure has 5 canopies with 5 forest types: 1) Evergreen forest, 2) Semi-evergreen forest; 3) Mixed bamboo forest, 4) Pure bamboo forest, 5) Wetland. Identified biodiversity of flora includes 1,615 vascular plant species, 710 genus, 162 families, 94 orders, 10 classes, 06 phylums, and 23 endemic sps. Identified biodiversity of fauna includes 1,521 species, 218 families, 55 orders, including Insecta with 756 species (mainly butterflies to be identified), 66 families, 9 orders; Pisces has 159 species, 32 families, 9 orders; Reptilia and Amphibia have 150 species, 21 families, 4 orders; Aves has 351 species, 68 families, 17 orders; Mammalia has 105 species, 21 families, 12 orders (CTNP, 2019).

Some rare species of flora in CTNP include *Azelia xylocarpa*, *Dalbergia oliveri*, *Pterocarpus macrocarpus*, *Sindora siamensis*, *Decussocarpus fleuryi*, and *Diospyros maritima*. Rare faunas such as Gaur (*Bos gaurus*), Asian Elephant (*Elephas maximus*), Yellow-cheeked Gibbon (*Hylobates gabriellae*), Silver Langur (*Trachypitecus sp.*), Black-shanked Douc Langur (*Pygathrix nigripes*), Sunda Pangolin (*Manis javanica*), Pygmy Slow Loris (*Nycticebus pygmaeus*), Sun Bear (*Ursus malayanus*), Asiatic Black Bear (*Selenarctos thibetanus*), Siamese crocodile (*Crocodylus siamensis*), and Orange-necked Partridge (*Arborophila davidi*) also inhabit the park.

At present, due to human impacts and climate change, the biodiversity resources of CTNP are declining. Though, in the last few years, CTNP and local authorities have collaborated to help local people to improve their livelihoods, strengthen forest patrolling, and developing commitment to the forest, illegal logging, trapping, snaring still occur.

Some negative factors that lead to reduced biodiversity include:

(1) Low literacy rates, low-awareness and failure to observance the legal regulations on forest protection and development of local people, especially ethnic minorities. Therefore, they often impact forest resources. The most common violations are illegal logging of rare timber, collecting non-timber forest products, and hunting, trapping and snaring wildlife. In 2018, the FPD of CTNP arrested and handled 99 cases of 129 violators. Evidence includes 7,342 m³ of rare wood (Group I), 14 homemade guns, 5,930 snares, and 13 sets of electrofishing equipment.

(2) The local people are still living difficult lives; they have low and precarious incomes, and unstable jobs (unsecured livelihoods). Several villages have been relocated by Vietnamese Government since the 1990s and have been supported by socio-economic development programs and projects to help them change cultivation practices, such as planting cashew trees. However, local people still face many challenges because they have not had high-yield plants due to climate change. High priorities include engaging villages within the core zone of CTNP in forest protection

and management, control of illegal grazing within the park, and improvement of ecotourism development programs.

(3) CTNP has abundant wetland areas, located in the center of Nam Cat Tien area. However, due to climate change and human impacts, the exotic plant *Mimosa pigra* and floating vegetation have invaded local wetlands, and the Park lacks resources and solutions for effective control.

(4) The capacity of biodiversity monitoring and forest protection of CTNP staffs is constrained. CTNP has 153 rangers spread among 21 ranger stations plus 1 mobile team. Forest rangers oversee forest management and protection and biodiversity conservation. Rangers should be trained and updated on biodiversity conservation knowledge, patrolling and monitoring wildlife, use of modern equipment and tools, law enforcement, and outreach for mobilizing local people to participate in forest protection. Updating the knowledge of the scientific staffs regarding new methods of biodiversity inventory and monitoring is also needed.

As the mentioned above, the biodiversity conservation and development in CTNP is a priority. Without urgent human intervention, biodiversity resources will be degraded quickly, and many rare and endemic wildlife will be extinct. In addition, local people will lose their livelihoods, and their material and spiritual life will also be affected severely.

Therefore, CTNP requests AFoCO to provide financial support and technical advice to help CTNP implement the project "*Conservation and development of forest ecosystems biodiversity resources at Cat Tien National Park*".

The project will contribute to Viet Nam's National Strategies and Goals of the Prime Minister's Decisions, including 6 main documents:

- 1) Decision No.432/QD-TTg dated April 12th2012 of the Prime Minister on approving the Vietnam Sustainable Development Strategy, period 2011-2020;
- 2) Decision No. 24/2012/QD-TTg dated June 1st, 2012 of the Prime Minister on investment policies for development of special-use forests, period 2011-2020;
- 3) Decision No. 1216/QD-TTg dated September 5th, 2012 of the Prime Minister on approving the Environment Protection National Strategy to 2020, vision 2030;
- 4) Decision No.1250/QD-Ttg dated July 31st, 2013 of the Prime Minister on approving the on Biodiversity National Strategy to 2020, vision 2030.
- 5) Decision No. 1976/QD-TTg dated October 30, 2014 of the Prime Minister on approving the Planning of the National Special-Use Forest System to 2020, vision 2030.
- 6) Decision No. 886/QD-TTg dated June 16, 2017 of the Prime Minister on approving the Sustainable Forestry Development Target Program period 2016-2020

2. Conformity with AFoCO's objectives and strategic priorities

Priority Target Area 2: Supporting research & development in climate change adaptation approaches.

- Improve the understanding, sharing information on the Park's biodiversity for the local managers and policy makers.
- Assess the climate change and social impact to the biodiversity of CTNP and proposing integrated management measures
- Enhance the capacity of management and conservation and attracting the participation of local communities in forest management and protection.

Priority Area 4: Local livelihood improvement & community-based small enterprise development

[Attachment-A]

- To conduct piloting of models for sustainable livelihood improvement of communities in the buffer zones engaged with forest protection and biodiversity conservation
- Support the special trees to help the livelihoods improving of ethnic minorities Village 3 and Village 4, Phuoc Cat 2 Commune, Cat Tien District, Lam Dong Province.
- Plan and establish the intensive grassland management for ethnic minority in Village 7, Dac Lua commune, Tan Phu district, Dong Nai province
- Develop the homestay model in Nam Cat Tien commune, Tan Phu district, Dong Nai province

3. Regionality

The project operates regionally within the core and buffer zone of CTNP in the administrative boundary of Tan Phu district (Dong Nai province) and Cat Tien district (Lam Dong province). The project would be having positive impacts on 4 aspects:

3.1. Economy

The project aims at improving livelihood and high income for the local community through specific activities such as supporting high-yield cashew-nut, durian, and avocado intercropping, replacing old and low productivity cashew-nut trees; planning, establishing and managing intensive pasture; and supporting the development of community-based tourism in the buffer zone and training local guides.

3.2. Society

- The project aims to increase awareness and reduce local peoples' impacts on CTNP wildlife and resources.
- The project activities originate from the needs and aspirations of the community. The project aims to improve the life quality, increase incomes, and limit violators' impact to the Park. The community has been involved in forest protection (community-based forest protection). That is a long-term and sustainable improvement.
- The projects activities actively involve local people, increasing equality of all social groups in the community, including Vulnerable Groups (ethnic minorities, women) and increasing participation in the social development process.
- Thereby, the project creates social changes in the community, contributes to promoting social justice, helps local people to be self-confident and increase their community's autonomy.

3.3. Environment

- The project activities contribute to raising awareness, improving livelihoods, raising incomes, and improving physical and spiritual life of local people in the project area, developing self-governance capacity in the community for sustainable environment protection.
- The project supports CTNP for improving conservation capacity, providing technical and financial support, improving wildlife habitat and monitoring biodiversity. The project results will have a significance for conservation and adapting to the climate change.

3.4. Institutions

- The project contributes to high awareness and capacity for the local decision-makers to better conservation understanding.
- The project contributes to improve institutions, regulations for the community activities in protection cooperation with CTNP.
- The project activities aim to enhance dissemination of conservation knowledge through workshops, experiences, and seminars with International and domestic National Parks, which are an

important premise for CTNP developing long-term relationships for international cooperation.

- Throughout the project activities, VNFOREST will learn to adjust the Special-Use Forest management and protection policy with improving local people livelihoods for the nature resources conservation effectively.

4. Information on project target area

Priority Target Area 2: Supporting research & development in climate change adaptation approaches

CTNP has inventoried flora and fauna from 2000-2004 (database not yet available). The inventory should be coordinated with monitoring activities. CTNP has been monitored since 1998-2004 by CTNP Conservation Project. Water birds and Pheasant (and others) have been nominated as priorities for monitoring. In addition, the re-introduction of Crocodiles in Crocodile Lake Program was the first reintroduction project in Vietnam. The Program released 60 adult crocodiles after DNA testing and training to restore natural instincts from 2001-2005 such as catching prey, laying eggs, and raising young. The program was successful, with a current population size of 286 individuals (minimum) including 58 adults, 228 juveniles (Guillaume Enot et al, 2018).

However, monitoring ceased after 2004 due to limited budget and manpower. Since 2013, CTNP re-established monitoring programs due to urgent needs of forest protection and management. Monitoring subjects are prioritized each year such as the Pheasant (2014, 2015), Water birds (2015, 2016, 2017, 2018, 2019), Freshwater Crocodiles (2013, 2014, 2015), Small Carnivores (2014, 2015), Yellow-cheeked Gibbon (2015), Asian Elephant (2017), Black-shanked Douc Langur (2018), Silver Langur (2019), and ungulates in Nui Tuong (2019).

The monitoring is accomplished by mainly Park's staffs (science, rangers, keepers). The monitoring results help CTNP to have accurate information on long-term population trends as well as anthropogenic and climate change-related impacts to the population, which allows the park to update the information of natural resources and adjust management accordingly.

However, due to the lack of funding, experts, facilities, research and patrol equipment, the monitoring requires support by the project for capacity building as well as budget. The project invites experts from institutes and universities for training rangers and scientific staffs.

- Training needs of forest rangers: Using SMART software, Map Infor, communication skills, patrolling equipment. Updating biodiversity conservation knowledge, patrolling, and wildlife monitoring skills; Law enforcement; Mobilizing local people to participate in forest protection effectively.

- Training needs for science staffs: Enhancing and updating knowledge and methods of biodiversity monitoring.

Due to the negative human activities and climate change, the biodiversity resources of CTNP are declining. In particular, exotic plants (e.g. *Mimosa pigra*) and floating vegetation have been strongly invasive in wetlands and the Park. CTNP has abundant wetland areas, located in the center of Nam Cat Tien area. Crocodile Lake has more than 70 hectares and Birds Lake has more than 50 hectares. At present, *Mimosa pigra* grows in CTNP wetland and the buffer zone of the Park. It covers the Birds Lake area (more than 100 hectares) and it has heavily invaded the Crocodile lake area. The Park has taken many actions to control *Mimosa pigra*, but none succeed. Up to now, measures include cutting and burning the trees and pulling out seedlings.

The community of floating vegetation include *Imperata cylindrica*, *Cynodon dactylon*, *Eichhornia crassipes*, and *Kyllinga nemoralis* and others. The floating vegetation grow up strongly and peak in the rainy season. During the expansion of Crocodile Lake, many small grasses are linked into large areas (each area is about 2-3 ha, 2 m thick, and 1.5-2 m high), especially in the dry season when the

water level is low. The large floating vegetation reduces the habitat of water birds, killing fish due to lack of oxygen, and limiting areas for crocodiles to breath when they swim into the floating vegetation. The process of decomposition, deposition, agglomeration of floating vegetation has been gradually filling Crocodile Lake, threatening the integrity and long-term viability of the habitat. The dynamics of floating vegetation in the Crocodile Lake are influenced strongly by hydrological processes and the local wind regime, which is in turn affected by climate change. At present, the Park has been hiring employees to cut the invasive vegetation into small pieces to move them to the shore in the rainy season, drying them to burn in the dry season to return organic to the soil and making natural mineral for large mammals.

However, previous methods of controlling *M. pigra* and floating vegetation mainly by manual removal has proven to be expensive and inefficient. The project invites experts to help propose other methods such as by mechanics or biological methods, develop new procedures for control, and raise community awareness about wetland conservation.

Priority Target Area 4: Local livelihood improvement & community-based small enterprise development

The methods of use in selecting the target communes are based on the following criteria: 1) Having ethnic minorities which are vulnerable groups; 2) Having low income, unsecured livelihoods; 3) Having constrained conservation capacity and awareness; 4) Higher number of violators than other areas.

Poor and near-poor HH are specified in the Vietnam Prime Minister's Decision No. 59/2015/QĐ-Ttg signed on November 19th, 2015, period 2016-2020. Poor income in the rural area is defined as under 700,000 VND/HH/month, and nearly poor as under 1,000,000 VND/HH/month, as well as lacking 5 basic services including health care, education, housing, clean water/sanitation, communication.

The PRA method combined with ABCD approach was used to analyze and assess the current status of community resources as well as its relationships, ensuring sustainability. The interviewers focused on 2 groups: (i) Leader of CPC and FU, WU; (ii) HH or individuals who depend on forests for their livelihoods.

After interviewing, 3 project areas of interest were identified:

- **Village 3 and Village 4** (Phuoc Cat 2 Commune, Cat Tien District, Lam Dong Province) are in the most remote areas of Lam Dong Province. Village 3 and Village 4 are *buffer zone* villages located entirely inside the *core zone* of Cat Tien National Park. Both are isolated villages in rugged and steep mountainous terrain, surrounded by forests. The villages are surrounded by natural forest within the core zone of CTNP with high biodiversity resources, so forest protection and management in these areas are prioritized. As soon as the villages were relocated by Vietnamese Government, they were supported by several socio-economic development programs and projects to help them change cultivation practices, such as planting cashew trees, but local people still face many challenges such as poor yield due to mismanagement and climate change.

+ **Village 3** is located in Phuoc Cat 2 commune, Cat Tien district, Lam Dong province. Currently, the land used is 166 ha, including 45.7 ha of residential land (including rice and vegetable crops), 120.3 ha of agricultural land (cashew trees). The commitment contracted area for protection is 1,674.52 ha. The village population is comprised of 32 HH, 153 people of S'Tieng ethnic minority, in which 23 are poor and 119 are near poor. 5 HH /21 people. The average income: 21-23 million VND/person/year. Occupation is mainly cultivation of cashew nut. The average plantation area is 3.13 ha/HH, but due to lack of production knowledge and climate change, productivity is low.

+ **Village 4** is in Phuoc Cat 2 commune, Cat Tien district, Lam Dong province. The commitment contracted area for protection is 1,483.61ha. The population is composed of 35 HH/146 people of Chau Ma ethnic minority which lives in the South-central Highlands. The villagers live entirely on

agriculture. The main crops and income are cashew nut and rice. Livestock (cattle and poultry) are in subsistence scale. The cashew area of Village 4 is larger than Village 3. Average cashew nut area 4 ha/HH (143ha/35 HH). The average products are 800 - 1000kg/ha. However, due to unstable agriculture and low cashew nut prices, a number of people come to the Park for illegal hunting, collecting NTPs, logging, and trapping. The number of poor HH: 21 HH with 96 people. Near-poor HH is 8 HH with 40 people.

Over the past few years, deforestation in Village 3 and Village 4 have been controlled, but there are still major violations of illegal logging and transportation of forest products, hunting, trapping, and snaring. The most common violation is illegal logging of rare timber, collecting non-timber forest products, and hunting, trapping and snaring wildlife. In 2018, the Forest Protection Department of CTNP arrested and handled 99 cases of 129 violators. Evidences including 7,342 m³ of rare wood (Group I), 14 homemade guns, 5,930 trapped strings, 13 sets of electrofishing. Unstable incomes as well as low literacy, education, and awareness of local people, especially ethnic minorities, therefore contributes directly to loss of biodiversity within the park.

- **Village 7 of Dac Lua commune**, is a remote commune in Tan Phu district, Dong Nai province. The population is composed of 216 HH, 1053 people, mainly Tay, Nung, Dao ethnic minorities who migrated from the Northern provinces (Cao Bang, Lang Son) to settle here in the 1990s. The commitment contracted area for protection of Group 1 is 35 HH, 1,010.10 ha, and of Group 2 is 13 HH, 393.40 ha. Their main income is rice and grazing. At present Village 7 has 203 HH with 242 domestic buffaloes and 471 cows (Da Bong Cua Ranger Station, 8/2019). Due to old fashioned farming techniques, many HH do not have land for grazing, so they often illegally graze their animals within CTNP boundaries. On January 08th, 2019 a buffalo attacked a ranger of Da Bong Cua Station while he worked to control illegal grazing at CTNP. The ranger was wounded seriously. If no effective and timely solution for illegal grazing is implemented, it will result in conflicts with conservation, destruction of plantations, increased risk of forest fire, and dispersal of disease and competition for food with wild animals.

- **Nam Cat Tien Commune** is located at the gateway of CTNP in the buffer zone. At present local HH are involved in providing food and accommodation for tourists, with 14 homestays, lodges, and companies. However, due to fast-paced and uncontrolled development, there is a lack of training and skills on ecotourism. Therefore, there are many inadequacies in marketing, hygiene, development planning.

According to the Constitution of Vietnam (2013), commune-level is the lowest in the administrative system in Vietnam. The Structure of CPC Unit includes 1 Chairman, 1 Deputy Chairman and Members. The CPC is responsible for economic, cultural, social, security, national defense and social environment issues in the area. CPC is the beneficiary and cooperates to carry out the project's activities. The FU, WU, and YU will also help the project mobilize and associate the community with the Project activities. National Target Programs for New Rural Development are being implemented in rural areas of Vietnam.

4.1. Geographic information

CTNP is located in 3 provinces: Dong Nai, Lam Dong and Binh Phuoc far 150km from Ho Chi Minh City along Highway 20 towards Dalat (Figure 1), spanning from 11^o20'50" to 11^o50'20" N and 108^o09'05" to 108^o35'20" E. In 2017, CTNP has prepared a project of expanding boundary. The area of CTNP after expanding is 82,597.4 ha, including the core zone (Cat Loc, Nam Cat Tien, Tay Cat Tien), Phuoc Cat 2 Commune, and Dac Lua Commune, and Nam Cat Tien Commune.

- In the **Cat Loc** area (Lam Dong province), the North and West borders Dak Nong province with the boundary at Dong Nai river, the South borders Cat Tien district of Lam Dong province, and the East borders Da Teh district and Bao Lam district of Lam Dong province.

- In **Nam Cat Tien** and **Tay Cat Tien** areas (Dong Nai and Binh Phuoc provinces), the North borders Cat Tien district of Lam Dong province and Bu Dang district of Binh Phuoc province, the South borders the remaining land of La Nga Forestry Company in Dinh Quan district, Dong Nai province, the East borders Tan Phu district to Dong Nai province with Dong Nai river, and the West borders the Dong Nai Nature-Cultural Reserve in Dong Nai Province.

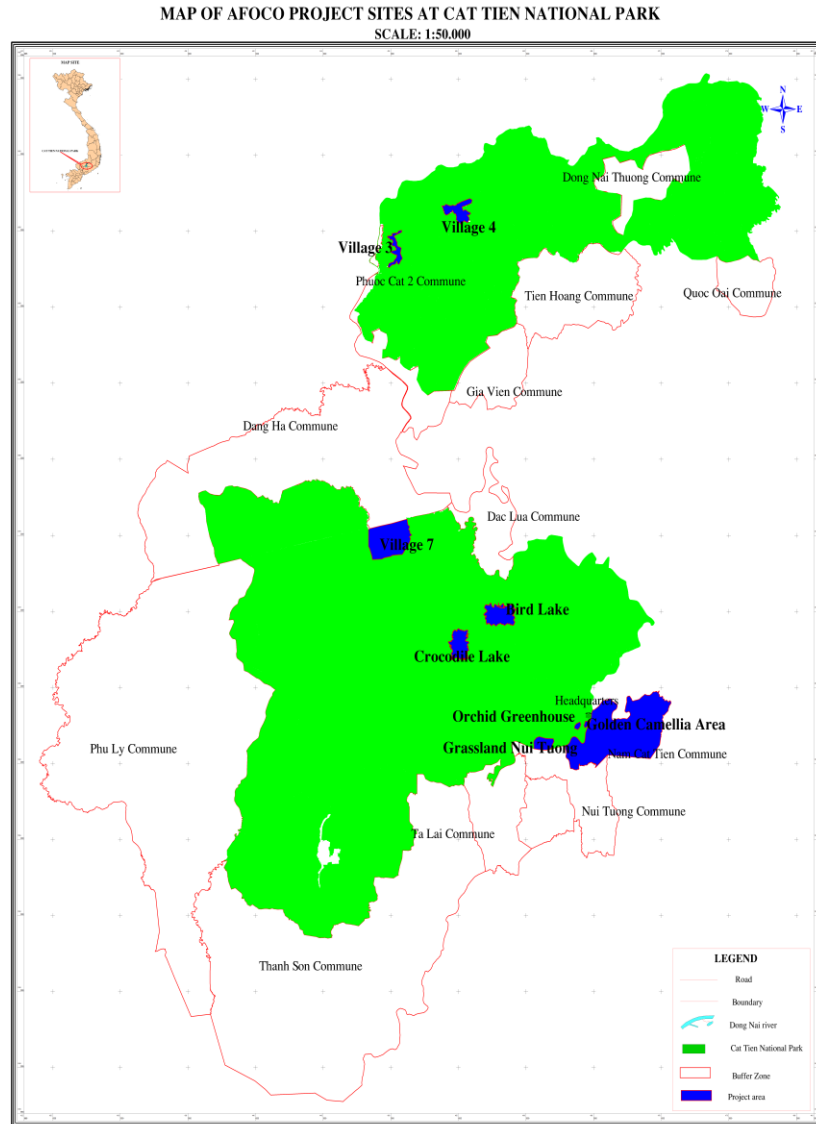
- **Phuoc Cat 2 Commune** is located in the north-west of Cat Tien District, 17 km from district center and extends over 40km along the Dong Nai River. Phuoc Cat 2 Commune is 14,835.35 ha, of which 14,158.12 ha is agricultural land, 12,689 ha is forestry land belonging to CTNP, and 1,629.12 ha is agricultural land managed by the commune. The terrain is inclined from North to South. Dong Nai River is the natural boundary between Phuoc Cat 2 commune and Dang Ha commune, Thong Nhat commune, Phuoc Son commune, Dong Nai commune (Bu Dang district, Binh Phuoc province) and Dak Sin commune (Dak R'Lap district, Dak Nong province). The terrain is complex, mainly high hills and mountains (300 - 400 m) and many small streams. Alternating areas are low and relatively flat, which is favourable for agricultural production.

- The center of the commune is a flat field, 136 - 152m, alternating with low-lying basins. In the rainy season, the swamps often flood from 1-3m. Dong Nai River is an important waterway route from Phuoc Cat 1 commune to Phuoc 2 commune to Vinh Ninh and Village 3. In addition to Dong Nai River, there are many streams which originate from CTNP and flow southwest into Dong Nai river.

- **Dac Lua Commune** was established on December 23rd, 1988 under Decision No. 64b of the Primer, formerly State-Owned Farms. The commune is far more than 60 km from the Center of Tan Phu district. It extends 40,664.15 ha, of which 38,475.97 ha is nature forest managed by CTNP. In 2017, the number of villages was adjusted from 13 to 6 Villages (Village 1; Village 2, Village 3, Village 4, Village 5, Village 6) and Village 7 was merged with Dang Ha commune (Bu Dang district, Binh Phuoc province).

- **Nam Cat Tien commune** is in the northeast of Tan Phu district, 24 km away from the Center of the Tan Phu district along the 333 Road (Ta Lai Road), 15 km from the Center of Da Teh district, Lam Dong province. The commune has 5 Villages with an area of 2,210.07 ha of which agricultural land use makes up 1,915.62ha. The population is made up of 1,686 HH with 6,985 people. The main income is agriculture.

Figures 1 - Map of the project sites at Cat Tien National Park



Source: CTNP, 2019

4.2. Environmental information

4.2.1. Cat Tien National Park

CTNP is located in a tropical monsoon climate. There are 2 distinct seasons: the dry season (from November, December to March, April) and the rainy season (from April, May to October, November). Hydrology in CTNP relates to the flow regime of Dong Nai river and stream, swamps systems. The Dong Nai River flows through CTNP about 90 km long, forming a natural boundary surrounding 1/3 of the park's circumference to the North, West and East.

Dak Lua Stream is the largest stream originating from a mountainous region with an elevation of about 350 m, located on the Southern border of Binh Phuoc Province. The stream has water all year round, flows Southeast and flows into the Dong Nai River. In addition to water out from swamps to rivers, Dak Lua stream also brings water from Dong Nai river go into the swamps about 30 days/year during rainy season (October - November).

In the rainy season, the Dak Lua stream becomes a “bridge” between the Dong Nai River and the wetland of CTNP, making the basin an open wetland ecosystem, which is important because of the large amount of sedimentation and aquatic animals will go deep into the Park, providing nutrition for this ecosystem. The swamps are connected to each other and connected to Dak Lua stream and connected to the swamps in the North of this stream (C4, Bau Thai, Bau Ngang, and a part of lowland of Dak Lua stream).

In the dry season, water flows into the Dong Nai River through the Dak Lua stream, and the water in Bau Ca Tre, Bau Sen, Bau Tron, and even Bau Chim almost runs out. Some swamps have low water levels such as Bau Sau, Bau Goc and Bau Thai Binh Duong (about 0.5 - 1m). In semi-wetland, it become the grassland habitats that attract ungulates such as Gaur, Deer, Wild boar, etc. In this season, almost streams have no water. Maximum and minimum water level difference between the rainy and dry seasons is about 4 m.

The water in the swamps is not only directly in the rainfall but also from the upper Dak Lua stream. Dak Lua stream plays a huge role in the hydrological regime of swamps and exchange material among them. This has ensured the existence and development of the swamps system and the entire wetland of CTNP.

CTNP is at the end of the Truong Son Mountain Range, a transition area to the Southern plain terrain, and includes both mountainous and hilly terrain, 100 m - 670 m ASL lower from the North to the South.

The geology of CTNP is shaped largely by Sedimentary, Basal and Sandstone rock which have developed into four main soil types. Soil developed on basalt (Fk) makes up nearly 60% of CTNP area and is mainly distributed in the south, which is rich in nutrients and good soil, deep, thick, red or reddish brown and dark brown with a lot of volcanic Tuff exposed. In this land, the forest is well developed with many rare timber trees and the forest's ability to recover is fast. Soil developed on sandstone (sandstone) (Fq), composes the second largest area of CTNP (about 20%). It is distributed mainly in the Cat Loc area. Soil developed on clay (Fs) is limited and mainly concentrated in the south interspersed with basalt. This soil type is quite fertile, but with heavy mechanical composition, so after deforestation, the roots are degraded quickly. Soil developed on ancient alluvial soil (Fo) including alluvial soils along streams and the Dong Nai river, occupies a large area in the North and South-east of CTNP. It is distributed on relatively flat terrain and low-lying areas flooded in the rainy season. This soil is nutrient-poor and has a shallow groundwater table, which is quite favorable for the growth and development of forest trees in the dry season.

4.2.2. Phuoc Cat 2 commune

Due to being located between the Central Highlands and the Southeast, the climate of Phuoc Cat 2 is affected by 2 ecological regions of the Southeast and the Central Highlands. The climate is

divided into the rainy season from April to October, rainfall for over 95% of the annual rainfall. During June to September, the rainfall is over 400mm, August to 612mm. There are three main soil types: alluvial soil, yellow red soil and sloping soil. Alluvial soil (4.18% of the area) is distributed along the Dong Nai River forming narrow, fairly flat fields in Phuoc Trung, Phuoc Hai, Phuoc Thai, Vinh Ninh and Village 3 suitable for the cultivation of annual crops (wet rice and corn). Red-yellow soil (89.56%) in the North and East is suitable for industrial crops. Slope soil (4.83%) is suitable for planting fruit trees. The dry season is from November to March. The average annual temperature is 25 - 28 °C, the highest 34 - 35°C, the lowest 17 - 18°C.

4.3. Socio-Economic information

CTNP buffer zone has more than 25,000 people in 36 communes and towns in 8 districts, 4 provinces of Dong Nai, Lam Dong, Binh Phuoc and Dac Nong. (CTNP,2017)

- Agriculture: Rice, corn, fruit trees, coffee, pepper, cashew and rubber trees make up 95-98% of agricultural production.
- Husbandry: A small number of people raise cattle and poultry on a HH scale, so the ability to prevent and control diseases is limited.
- Industry, handicrafts and services: There are no industrial zones or large processing facilities capable of attracting local labor in the region. Trade and services are underdeveloped.
- Culture and education: the system of schools has met the learning needs of school-aged students. All villages have culture house, TV, radio system.
- Health: All villages have Health Stations, with a team of medical doctors and regular medical examination and treatment, and expanded vaccinations.
- Post and telecommunications: communication has been 100% covered in two forms: fixed and mobile phone networks.
- PFES: The HH in Village 7 and Dac Lua commune are paid 342,000 VND/ha from PFES of Dong Nai Province and Decision 24/Ttg with an average income of 3.5 million VND/year/HH. The HH in Phuoc Cat 2 commune are paid 600,000 VND/ha from PFES in Lam Dong province with an average income of 13.9 million VND/year. 100% of the HH are involved in the commitment forest. The proportion of local people income from PFES and others averages about 10% of total HH income. CBT HH in Nam Cat Tien commune do not receive PFES. In addition, the buffer zone villages of CTNP receive 40 million VND/village/year from Decision 24/Ttg to support community development (community house building, electricity, roads, irrigation, seed improvement, etc.).

In general, the life of the people in the region is still very difficult because the income of the people is mainly based on agricultural production, low crop productivity, fluctuating prices of corn products, and low livestock production.

SECTION B. RATIONALE AND OBJECTIVES

1. Rationale

CTNP has a rare type of evergreen tropical humid forest in Vietnam, which is rich in biodiversity resources. However, diversity has been increasingly threatened by the very strong human impact. In recent years, CTNP has been supported by the Viet Nam Government, local authorities, domestic and international Agencies, NGOs and scientists. Awareness by local people of forest protection regulations has improved. CTNP has been well protected so far. However, biodiversity conservation at the CTNP has been faced with many difficulties and challenges.

Human impacts on the park include illegal logging, hunting, trapping, snaring of wildlife species, conversion of land use for industrial crops in the buffer zone, and collection of NTPs (rattan, bamboo shoots), which cause habitat degradation. Cattle grazing inside the the Park boundary can spread pathogens and compete for food with wildlife. Sand mining on the Dong Nai River is changing the hydrological regime of wetlands in CTNP. The use of fertilizers and chemicals in agricultural production and grasslands causes water pollution in the dry season every year. Due to human introduction and climate change, exotic plants and vegetation including *Mimosa pigra* are gradually invading the wetlands at the CTNP.

Cooperation between the CTNP with local authorities is also inadequate. Some forestry companies bordering the Park are logging and converting forest land, reducing the habitat of wildlife. Some species have disappeared such as Vietnamese rhinoceros (*Rhinoceros sondaicus annamiticus*), and many species are endangered such as Gaur, Elephant, Bear, and Gibbon.

Effective conservation in CTNP requires overcoming these challenges. This will include:

- Enhance conservation capacity of CTNP. Staffs training, improving habitat quality. Exchanging, learning, international cooperation with NPs, NRs inbound and out-bound.
- Improve livelihoods for local people in the buffer zone to reduce pressures on park resources and violations, especially ethnic minorities; Improve community based forest protection.
- Local officers need to be trained on biodiversity conservation for human life, improve their capacity and develop solutions to adapt to climate change.

1.1. Stakeholder analysis

The project activities are envisioned to provide critical link to facilitate beneficial and productive relationships between Central, local agencies and communities, the Park and management agencies, the Park and research agencies in the joint mission of biodiversity conservation at CTNP (Table 1).

Table 1. Stakeholder analysis table

Stakeholder group	Characteristics	Problems, needs, interests	Potential benefits	Involvement in the project
Primary stakeholders				
Village 3, 4 (Phuoc Cat 2), village 7 (Dac Lua), eco-tourism HH (Nam Cat Tien commune)	Living inside the core zone or near the park boundary. Ma and S’Tieng ethnic minorities (Phuoc Cat 2), Tay, Nung and Dao (Dac Lua). Nam Cat Tien commune has some untrained ecotourism business HH. Participation in the project implementation commitment	Low awareness Unstable livelihoods, low incomes, hunting and trapping wildlife, exploiting forest products, grazing cattle in the park boundary.	People are educated about climate change and biodiversity conservation. Livelihoods and income improved by high-yield crop varieties, intensive grazing pastures, and eco-tourism.	As the subject of the project, benefit directly from the project Participate in monitoring, evaluation Attend training courses and supported by the park to improve their livelihoods.
People's Committees of Dac Lua, Phuoc Cat 2 and Nam Cat Tien	Buffer zone communes. Many ethnic minority HHs and poor HH often impact park resources.	Participation and coordination in forest management and protection is still constrained	Training to improve capacity and understanding of conservation, climate change, social impacts by commune officers. Improvements of cooperation method and mechanism are needed	Coordinate with the Park to develop options for community livelihood transformation of vulnerable groups. Participate in training courses
CTNP	The park has rich biodiversity resources, is a biosphere	Communities living in the core and buffer zone	The forest is well protected.	Planning, coordinating, organizing and

Stakeholder group	Characteristics	Problems, needs, interests	Potential benefits	Involvement in the project
	reserve. Mission mainly protection and management, research, ecotourism development and community development.	endanger management and protection. Forests impacted by illegal logging, wildlife hunting, etc. Funding, conservation is limited. Habitat of species has not been improved.	Conservation capacity has been improved. Habitat is improved. Good coordination with local authorities and agencies	implementing of the project. Benefits directly from the project. Implementing livelihood improvement plans, wildlife monitoring, planting Yellow Camellia, orchid garden, and improving habitat.
Secondary stakeholders VNFOREST	Established by Decision No. 04/2010/QD-TTg dated January 25 th , 2010 (directly under MARD) of Prime Minister.	Resources, conservation, policies and livelihoods are constrained	Replicate successful models, propose policies to better protect forests	The direct Superior Agency of the CTNP Directing, operating and supporting the Park in compliance with the donor commitment.
People's Committees of Cat Tien (Lam Dong) and Tan Phu (Dong Nai)	Buffer zone districts. Collaborate with the Park to develop livelihood improvement options for people.	Some specialized officers do not understand about conservation and climate change	Officers are trained, awareness raising about conservation, climate change.	Directing and guiding communes to implement the project effectively Supporting and coordinating the implementation of socio-economic survey programs, develop community livelihood, change practices and farming methods for people to adapt to climate change.
DARD Dong Nai, Lam Dong province	Specialized management agency on forestry in the province	Some specialized officers do not understand about	Officers are trained, awareness raising about conservation, wildlife	Supporting and coordinating agricultural and forestry extension activities, propose

Stakeholder group	Characteristics	Problems, needs, interests	Potential benefits	Involvement in the project
Institute of Tropical Biology HCMC	<p>Cooperating with the Park in commitment forest community from PFES</p> <p>As a Scientific research agency on biodiversity. Join the topics of biodiversity monitoring and research wetland ecosystem, environmental education</p>	<p>conservation and climate change</p> <p>Not yet training plan on biodiversity and climate change planning</p>	<p>and climate change</p> <p>A lot of data collected. Staffs capacity has been improved through investigations, workshops and training activities.</p>	<p>solutions to improve community livelihoods, farming methods for people to adapt to climate change</p> <p>Supporting and coordinating seminars and training courses on biodiversity and climate change; Develop adaptive solutions to climate change effects, monitor rare birds and animals</p>
Southern Institute of Ecology University of Natural Sciences Ho Chi Minh City	<p>Participated in research, biodiversity monitoring and environmental education for students</p> <p>Researching and monitoring bio-diversity and habitat improvement</p>	<p>Not yet cooperation plan on environmental education for students</p> <p>No feasible measures for controlling <i>Mimosa pigra</i> in Bird Lake and floating vegetation in Ramsar-Crocodile Lake</p>	<p>A lot of data collected. Staffs capacity has been improved through investigations, workshops and training activities.</p> <p>A lot of data collected. Staffs capacity has been improved through investigations, workshops and training activities.</p>	<p>Supporting and coordinating development of training programs on biodiversity and environmental education for the community and high school students.</p> <p>Technical support to improve the habitat of vulnerable ecosystems invaded by <i>Mimosa pigra</i> in Bird Lake and floating vegetation in Crocodile Lake</p>
Vietnam Forestry University	There are many experts in socio-economic investigation, flora, fauna monitoring programs	Not many cooperation programs with the Park	A lot of data collected. Staffs capacity has been improved through investigations, workshops and training	Support for socio-economic survey programs, flora, fauna monitoring programs.

[Attachment-A]

Stakeholder group	Characteristics	Problems, needs, interests	Potential benefits	Involvement in the project
			activities.	
Tertiary and other stakeholders				
FU, WU, YU	Social mobilization programs, attracting all participants involved	Not many cooperation with the Park	Officers are trained, awareness raising	Coordinating mobilizing HH to participate in the project effectively

1.2. Problem analysis

Causes of biodiversity resource depletion in CTNP:

Social:

Awareness of forest management and protection among local people in the buffer zone, especially that of ethnic minorities is limited. Customs and practices in some places are still backward. The habit of using forest and wildlife products is common. Forest land is encroached, while forest products are over-exploited. Forests are at risk of being narrowed and fragmented, causing poor quality and loss of habitat for wildlife species.

Knowledge of biodiversity conservation among CTNP staff and local government leaders is limited. Wildlife monitoring has not been carried out regularly due to budget constraint, insufficient equipment and lack of monitoring skills. Many endangered and rare species have not been inventoried, and habitat quality has not been assessed.

The coordination between state management agencies in the management and protection of natural resources is not strong. Asynchronous policies and laws, together with non-deterrent handling of violations combine to hinder the effective enforcement of forest protection law.

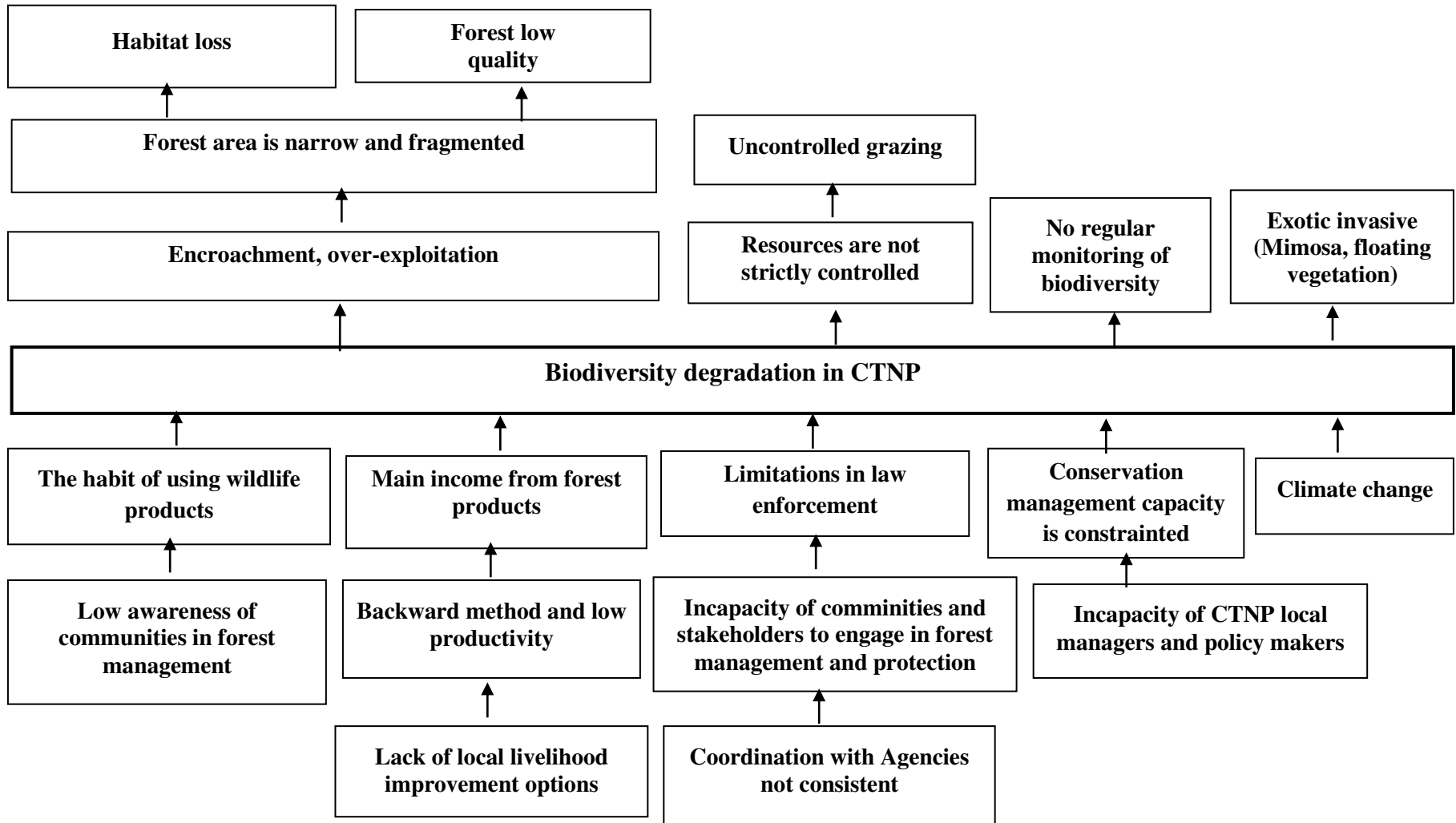
Economic:

Local people in the buffer zone lack information and access to livelihood improvement options. Outdated farming methods. In Phuoc Cat 2 commune, ethnic people have practiced monoculture farming of cashew trees since the 1990s. Currently, cashew plantations are old and low yielding. In Dac Lua commune, people have the custom of grazing cattle (buffaloes, cows). As there is no grazing land available, cattles are freely grazing within the park's boundaries, which poses risks of disease spread, forest fires, and competition for food with wildlife. There have been many conflicts between forest rangers and local people. In Nam Cat Tien commune near the Park's headquarters, homestay tourism is spontaneous and not effective as people are not trained, and their business not connected with the Park and tourism companies.

Environment:

Climate change has affected natural habitat of wildlife species and may pose a risk of degradation. *Mimosa pigra* is growing rampantly. Grasses grow rapidly in swamp areas, narrowing the habitats of aquatic animals such as freshwater fish, freshwater crocodiles, polluting water sources, causing sedimentation, accumulation, and raising the lake bed. This may pose the risk of wetlands loss in the future.

Figure 2 - Problems Tree



1.3. Logical framework matrix

Table 2 - Logical framework matrix

	Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
Overall objective	To improve the conservation and development of forest ecosystems biodiversity resources at CTNP engaged with sustainable livelihood improvement for communities in the buffer zone.	By 2025, Biodiversity resources have been well protected and developed. Wetland habitat has been improved. Local authorities and local people have closely engaged with CTNP. Livelihoods of local people and communities in the buffer zone have been improved. All kinds of violations have been decreased by 5%	Mid term, PCR	Exit strategies Sustainability Mechnisms
Objective 1	To improve knowledge and information sharing on biodiversity of forest ecosystems of the Park for local managers and policy makers	At least 80 provincial officers from the DONRE, DARD, DOST of Dong Nai, Lam Dong provinces and 80% of district and commune leaders in the buffer zone have improved knowledge and information on biodiversity of forest ecosystems of the Park	Project Completion Report	Factors that may affect project implementation Operational Concerns
Output 1	Training, sharing knowledge, experiences and skills on biodiversity conservation to the Province, District, Commune Officers	At least 80 provincial officers from the DONRE, DARD, DOST of Dong Nai, Lam Dong, Binh Phuoc provinces and 80% of district and commune leaders in the buffer zone have participated in the training courses on biodiversity conservation	Factors that may affect project implementation. Operational Concerns	Factors or pre-conditions that must be satisfied before start of implementation Project arrangements (project coordination mechanisms, staff assignments, etc)
A.1	Assess the needs of biodiversity training for local policy makers and managers	At least 30 staffs/agency from the DONRE, DARD, DOST of Dong Nai, Lam Dong provinces have been interviewed and an assessment report on the needs of biodiversity training for local policy makers and managers has been produced by Quarter 2 of 2022	Progress Report (Physical/Financial)	Timely submission and analysis/reporting
A.2	Develop training materials and invite experts based on results of needs assessment	A set of materials used in training with high qualified experts has been developed by Quarter 4 of 2021	Set	Materials to be approved

[Attachment-A]

	Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
A.3	Organize training courses for staffs of DONRE, DARD, DOST of 2 provinces of Dong Nai, Lam Dong, districts and communes in the buffer	Two training courses for staffs of DONRE, DARD, DOST of Dong Nai, Lam Dong provinces, district and communes are been organized in Quarter 3 of 2022 and Quarter 2 of 2023, respectively, with the participation of 52 people per course .	Course	Trainees have been improved capacity
Output 2	Study tour in national parks and protected areas inbound and outbound	A study tour to NPs and NRs inbound has been organized with the participation of 15 people.	Report. Evaluation paper	Trainees have been improved capacity
B.1	Assess the needs and plan of study tour	At least 15 staffs of the DONRE, DARD, DOST of Dong Nai, Lam Dong provinces and 80% of district and commune leaders in the buffer zone have been interviewed and an assessment report on the needs and plan of study tour has been produced by Quarter 1 of 2023	Report	Planing to be approved
B.2	Develop a study tour plan	A study tour plan has been developed by Quarter 1 of 2023	Plan	Planing to be approved
B.3	Organize a study tour to NPS and NRs inbound	A 3-day study tour with participation of 15 people to NPs and NRs inbound has been organized by Quarter 2 of 2023	Study tour	Trainees have been improved capacity
Objective 2	To assess the climate change and social impacts on CTNP biodiversity and integrated management measures, improve management and conservation capacities of project stakeholders, and to engage local communities for forest management and protection	The climate change and social impacts on CTNP biodiversity in recent 5 years has been assessed, the management and conservation capacities of project stakeholders have been improved and local communities have been engaged in forest management and protection.	Report and verified data	Data collection systematic in recent 5 years
Output 3	Assess the climate change and social impacts to the biodiversity of CTNP	An assessment report on current status of climate change and social impacts on CTNP biodiversity in recent 5 years has been produced.	Reports and verified data	Data collection systematic in recent 5 years
C.1	Collect and analyze secondary data on climate change and social impacts on biodiversity of CTNP	Data on climate change and social impacts on CTNP has been collected and analyzed two times by end of 2021 and 2023. Two reports on collected data have been accordingly produced.	Report	Report to be approved

[Attachment-A]

	Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
C.2	Conduct survey and assessment of climate change and social impacts to CTNP biodiversity	Climate change and social impacts on CTNP biodiversity have been surveyed and assessed and an assessment report on climate change and social impacts to CTNP biodiversity has been produced by Quarter 4 of 2021	Report	Report to be approved
C.3	Develop a database of climate change and social impacts to CTNP biodiversity	A database (format and content) of climate change and social impacts to CTNP biodiversity has been developed by Quarter 1 2022	Database	Report and Database to be approved
Output 4	Organize trainings on climate change and social impacts for people and local authorities in the buffer zone	Based on a set of developed training documents, 5 training courses on climate change and social impacts for local authorities and people in the buffer zone have been organized every year with the participation of 30 trainees per course.	Report. Evaluation paper	Trainees have improved capacity
D.1	Assess the needs of biodiversity training for local authorities and people	An assessment report on the needs of biodiversity training for local authorities and people has been produced by Quarter 4 of 2021.	Report with recommendations	Report to be approved
D.2	Develop training materials and invite experts	A set of materials used in training with high qualified experts has been developed by Quarter 4 of 2021.	Set	Material to be approved
D.3	Organize training courses for local authorities and people in the buffer zone of 3 communes Phuoc Cat 2, Dac Lua and Nam Cat Tien	Five training courses for local authorities and people in the buffer zone of 3 communes (Phuoc Cat 2, Dac Lua and Nam Cat Tien) have been organized every year with participation of 30 trainees per course, of which at least 30% of trainees are female.	Course	Trainees have been improved capacity
Output 5	Implement measures and solutions to minimize negative impacts of climate change and social impacts at CTNP (i.e. improving the habitat of Ramsar-Crocodile Lake and neighbouring wetland).	Measures and solutions to minimize negative impacts of climate change and social impacts to CTNP have been implemented every year.	Proposed solutions have been verified	Improved Ramsar-Crocodile Lake and neighboring wetland habitat

[Attachment-A]

	Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
E.1	Assess solutions to minimize negative impacts of climate change and social impacts on CTNP by consultants.	An assessment report on solutions to minimize negative impacts of climate change and social impacts on CTNP has been produced by Quarter 4 of 2021.	Report	Report to be approved
E.2	Choose the appropriate solutions	A consultation workshop on selection of appropriate solutions to minimize negative impacts of climate change and social impacts to CTNP has been organized by Quarter 4 of 2021	Workshop	Workshop have been approved
E.3	Improve habitat of Ramsar-Crocodile Lake	5ha of habitat of Ramsar-Crocodile Lake has been improved every year.	Ha/year	Habitat have been improved
E.4	Control Mimosa pigra at Bird Lake	10ha of Mimosa pigra at Bird Lake has been controlled every year.	Ha/year	Habitat have been improved
E.5	Improve grassland for ungulate in Nui Tuong	50ha of grassland for ungulate in Nui Tuong has been improved every year	Ha/year	Habitat have been improved
Output 6	Enhance local communities' capacity to adapt with climate change and social impacts (i.e. changing cultivation methods, practices for local people in buffer zone to adapt to climate change)	Based on a set of developed training documents, two training courses for local communities with participation of at least 80 households on adaptation of climate change and social impacts have been organized in 2022 and 2023.	Report, Workshop	Local people to be trained on adapt with climate change and social impacts
F.1	Assess the needs of capacity building for local communities to adapt to climate change and social impacts	An assessment report on the needs of training for local communities on adaptation of climate change and social impacts has been produced by Quarter 4 of 2021.	Report	Report to be approved
F.2	Develop training materials and invite experts	A set of materials used in training with high qualified experts has been developed by Quarter 1 and Quarter 2 of 2022.	Set	Materials have been approved
F.3	Organize training courses on capacity building for local communities to adapt to climate change and social impacts	Two training courses for local communities with participation of at least 80 households on adaptation of climate change and social impacts have been organized in Q 4 of 2022 and Q 1 of 2023.	Course	Trainees have been improved capacity

[Attachment-A]

	Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
Output 7	Develop a model of planting Golden Camellia (<i>Camellia spp.</i>)	A 5-ha model of planting Golden Camellia in Nui Tuong with plantation of 1.200 trees (240 trees per ha) has been developed and maintained every year.	Collected data are verified	Standard model
G.1	Survey the potential and situation to build a model of planting Golden Camellia	A report on surveying potential and situation to build a model of planting Golden Camellia has been produced by Quarter 4 of 2021.	Report	Report and suggestions are feasible
G.2	Develop a technical plan for planting and maintaining model of Golden Camellia plantation	A technical plan for planting and maintaining model of Golden Camellia plantation has been developed by Quarter 4 of 2021.	Plan	Effective maintenance
G.3	Develop and maintain plantation a model for the first 5 years	A 5-ha model of planting Golden Camellia in Nui Tuong with plantation of 1.200 trees (240 trees per ha) has been developed in 2021 and maintained from 2022 to 2025.	Model	Effective maintenance
G.4	Conduct fire prevention and anti-pests and diseases in the first 4 years	Fire prevention and anti-pests and diseases have been conducted in the plantation model of Golden Camellia for 4 years from 2021 to 2025.	Year	Effective maintenance
G.5	Develop product branding	From 2023 to 2025, brand of Golden Camellia has been developed and labelled in accordance with domestic legal regulations (marketing research in 2023; Label regisiter in 2024; advertising in 2025)	Product	Products to be promoted
Output 8	Collect orchids (Orchidaceae) and set up a greenhouse for orchid genus resource conservation at CTNP.	At least 50 local orchid species have been collected and a greenhouse for orchid genus resource conservation at CTNP has been set up and maintained	Report	Plant and maintain according to current standards. Greenhouse meets technical standards
H.1	Survey potential and situation to build an orchid collection model	A report on surveying potential and situation to build an orchid collection model has been produced by Quarter 3 and Quarter 4 of 2021.	Report	Reports, suggestions are feasible
H.2	Conduct inventory and collection of local orchids species	At least 50 local orchid species have been inventoried and collected in 2021 and 2022. (25 species in 2021 and 25 species in 2022)	Species	Trainees have been improved capacity

[Attachment-A]

	Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
H.3	Design and build a system of orchid greenhouses and the grid house	A system of orchid greenhouse and grid house has been designed and built by Quarter 4 of 2022.	System	Effectove model
H.4	Purchase equipment and supplies for the greenhouse system	A set of equipment and supplies for the greenhouse system has be purchased in 2022 and 2023.	Set	Effective materials
H.5	Maintain greenhouse system	The greenhouse system has been maintained for 4 years from 2022 to 2025.	Year	Effective maintenance
Output 9	Develop supporting documents, materials and tools to improve conservation capacity.	Supporting documents, materials and tools to improve conservation capacity have been developed, published and circulated to stakeholders in 2022.	Documents, materials, and tools appraised by scientists, experts	Local communities collaborate with CTNP in forest management and protection. Number of violations reduced.
I.1	Prepare a plan supporting documents, materials and tools (patrolling, wildlife monitoring, educating communities in forest protection, handling violators and handbooks for rangers and communities) to improve conservation capacity	A plan for supporting documents, materials and tools (patrolling, wildlife monitoring, educating communities in forest protection, handling violators and handbooks for rangers and communities) to improve conservation capacity has been prepared by Quarter 1 of 2022.	Plan	Planing to be approved
I.2	Contract experts	Two experts have been contracted by Quarter 1 of 2022 to prepare supporting documents, materials and tools to improve conservation capacity.	Person	Contract to be approved
I.3	Compile documents and materials	A set of supporting documents, materials and tools has been compiled by Quarter 4 of 2022.	Set	Documents to be approved
I.4	Organize workshop on reviewing documents	A workshop on reviewing supporting documents, materials and tools has been organized in Quarter 1 of 2023.	Workshop	Workshop to be approved
I.5	Submit supporting documents and materials to competent authority for censoring and licensing	By Quarter 4 of 2022, supporting documents and materials have been censored and licensed by competent authority before being printed and circulated.	Time	Legal document
I.6	Design, print, publish, circulate supporting documents and materials	One set of documents with fifty (50) copies of supporting documents and materials have been designed, printed, published and circulated by Quarter 1 and 2 of 2024.	set	Legal document

[Attachment-A]

	Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
Output 10	Organize trainings on forest protection skills associated with biodiversity monitoring, focusing on waterbirds, Phasianidea, Hornbills, large mammals, and small carnivores. Monitor some rare species by remote sensing technology by consultants, and monitor key species by CTNP	Two training courses on forest protection skills associated with biodiversity monitoring have been organized in 2021 and at least 5 key species, focusing on waterbirds, Phasianidea, Hornbills, large mammals, and small carnivores, have been monitored every year by using remote sensing technology.	Annual monitoring, Report and verified data	Technicians trained and key sps. regularly monitored
J.1	Assess training needs	An assessment report on the needs of trainings on forest protection skills associated with biodiversity monitoring has been produced by Quarter 3 of 2021.	Report	Technicians trained and key sps. regularly monitored
J.2	Develop training materials and invite experts	A set of materials used in training with high qualified experts has been developed by Quarter 3 of 2021.	Set	Technicians trained and key sps. regularly monitored
J.3	Organize training courses	Two training courses on forest protection skills associated with biodiversity monitoring have been organized in Quarter 3 of 2021 with the participation of 30 trainees per course.	Course	Technicians trained and key sps. regularly monitored
J.4	Monitor key species	At least 5 key species, focusing on waterbirds, Phasianidea, Hornbills, large mammals, and small carnivores, have been monitored every year by using remote sensing technology and annual monitoring reports have been produced accordingly.	Report	Technicians trained and key sps. regularly monitored
Output 11	Organize trainings on forest patrolling, use of patrol equipment (maps, compass, GPS). Develop plans and methods for patrolling, skills of communication and education, management of violators in the community. The participants would be Park's rangers and scientific staffs.	Four (4) training courses on forest patrolling and protection, skills of using equipment for rangers have been organized in 2021 and 2022.	Report and verified data	Rangers trained; violations monitored
K.1	Assess and survey the needs of training on forest protection patrol, skills of using equipment for rangers	An assessment report on the needs of training on forest protection patrol, skill of using equipment for forest rangers has been produced by Quarter 4 of 2021.	Report	Reports, suggestions are feasible

[Attachment-A]

	Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
K.2	Develop training materials and invite experts	A set of materials used in training with high qualified experts has been developed from Quarter 1 to Q 3 of 2022.	Set	Trainees have been improved capacity
K.3	Organize the training courses on forest patrolling and protection, skills of using equipment for rangers	Two training courses on forest patrolling and protection, skills of using equipment for rangers have been organized in Quarter 4 of 2022 with the participation of 30 trainees per course.	Course	Trainees have been improved capacity
K.4	Organize training courses on developing forest protection patrolling plan and method, communication education skills, management of violators in the community.	Two training courses on forest patrolling and protection, skills of using equipment for rangers have been organized in Quarter 4 of 2022 with the participation of 30 trainees per course	Course	Trainees have been improved capacity
Output 12	Develop coordination regulations on forest protection with local authorities, sign commitments on forest protection with households (without community forest protection committee establishment)	By 2021, coordination regulations on forest protection have been developed and 100% of communes (32 communes) at the buffer zone have signed forest coordination regulations with the Park and at least 70% of households in communes have signed commitments on forest protection.	Coordination regulations, commitment paper signed	Coordination regulations, commitment paper signed
L.1	Review and update coordination regulations on forest protection, contents of cooperation with local authorities and commitments of HH	A report on reviewing and updating coordination regulations on forest protection, contents of cooperation with local authorities and commitments of households has been produced by Quarter 4 of 2021.	Report	Reports, suggestions are feasible
L.2	Finalize coordination regulations on forest protection, contents of cooperation with local authorities and commitments of HH	By Quarter 4 of 2021, 100% of communes (32 communes) at the buffer zone have signed coordination regulations on forest protection with the Park and at least 70% of households in communes have signed commitment on forest protection.	Commune	Reports, suggestions are feasible
L.3	Disseminate coordination regulations on forest protection	By Quarter 1 of 2022, coordination regulations on forest protection have been disseminated to 100% of districts (8 districts).	District	Reports, suggestions are feasible
L.4	Implement and evaluate coordination regulations, commitments of HH	Coordination regulations and commitments of households have been implemented and evaluated every year. By 2025, a final evaluation report has been produced.	Report	Reports, suggestions are feasible

[Attachment-A]

	Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
Output 13	Study tours and workshop inbound and outbound to NPs, NRs Participants would be Park's staffs and Leaders of communes, districts.	By 2025, through a number of study tours to NPs, NRs inbound and outbound, an assessment report on economic development potential engaged with biodiversity conservation has been produced.	Report	Economic potential developed
M.1	Select locations and prepare plan for study tours	A report on selection of locations and preparation of plan for study tours has been produced by Quarter 3 of 2022.	Report	Reports, suggestions are feasible
M.2	Organize study tours to NPs, NRs inbound	Two trips to NPs, NRs inbound have been organized in 2022 and 2023 with the participation of 20 people per trip.	Trip	Trainees have been improved capacity
M.3	Organize study tours to NPs, NRs outbound	Two trips to NPs, NRs outbound have been organized in 2022 and 2023 with the participation of 20 people per trip.	Trip	Trainees have been improved capacity
Objective 3	To conduct piloting of models for sustainable livelihood improvement of communities in the buffer zone	By 2025, three models for sustainable livelihood improvement of communities in the buffer zone have been set up and duplicated.	Compare income of HH before and after project	Local people have high income, good livelihoods
Output 14	Survey and assess the benefits and potentials of economic development in the future of the Park and local community	In 2023, a report on surveying and assessing the benefits and potentials of economic development in the future of the Park and local community has been produced.	Report	Reports, suggestions are feasible
N.1	Develop a plan for surveying and assessing the benefits and potentials of economic development in the future of the Park and local community	A plan for surveying and assessing the benefits and potentials of economic development in the future of the Park and local community has been developed in Quarter 1 of 2022.	Plan	Reports, suggestions are feasible
N.2	Conduct survey and assessment	A report on surveying and assessing the benefits and potentials of economic development in the future of the Park and local community has been produced by Quarter 4 of 2022.	Report	Reports, suggestions are feasible

[Attachment-A]

	Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
Output 15	Identify economic benefits of biodiversity conservation engaged with improving livelihoods for local people in the buffer zone. Participants would be community members. They would participate the workshops, meetings for decision making (both of planning and implementing)	A report on identification of economic benefits of biodiversity conservation engaged with improving livelihoods for local people in the buffer zone has been produced in 2022.	Verified data	Economic benefits identified and developed
O.1	Consult technical experts on identifying economic benefits of biodiversity conservation engaged with improving livelihoods for local people in the buffer zone	By Quarter 2 of 2022, at least 5 domestic experts and 3 foreign experts have been consulted to identify economic benefits of biodiversity conservation engaged with improving livelihoods for local people in the buffer zone.	Expert	Reports, suggestions are feasible
O.2	Organize workshop on identifying economic benefits of biodiversity conservation engaged with improving livelihoods for local people in the buffer zone	By Quarter 3 of 2022, two workshops on identifying economic benefits of biodiversity conservation engaged with improving livelihoods for local people in the buffer zone have been organized.	Workshop	Reports, suggestions are feasible
Output 16	Support the planting, maintenance and marketing of high value tree crops (cashew-nut, durian, avocado) to help improve the livelihoods of ethnic minorities in Village 3 and Village 4 of Phuoc Cat 2 commune	20 ha of high value trees (cashew-nut, durian, avocado) have been supported to help improve livelihoods of at least 50 households of ethnic minorities in Village 3 and Village 4 of Phuoc Cat 2 Commune.	Verified data	Economic benefits identified and developed
P.1	Use PRA methodology for identification of locations and participants and profiling. Support high value trees to help improve livelihoods of ethnic minorities Village 3 and Village 4, Phuoc Cat 2 Commune	By Quarter 2 of 2022, 20 ha of high value trees (cashew-nut, durian, avocado) have been supported to help improve livelihoods of at least 50 households of ethnic minorities in Village 3 and Village 4 of Phuoc Cat 2 Commune.	Ha	Reports, suggestions are feasible
P.2	Organize trainings on skills and knowledge for HH on planting and maintaining techniques, sustainable production development, clean agricultural production of specific local products, associated with CBT	Two training courses on skills and knowledge for HH on planting and maintaining techniques, sustainable production development, clean agricultural production of specific local products, associated with CBT have been organized in Quarter 1 of 2022 with the participation of at least 50 households.	Course	Trainees have been improved capacity

	Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
P.3	Support marketing of high value agricultural products through supply demand conferences, fairs, exhibitions, and consideration of consumption patterns of agricultural products in the provinces.	By Quarter 1 of 2025, marketing of high value agricultural products has been supported through supply demand conferences, fairs, exhibitions in 3 sites of the district and 5 sites of Da Lat city, Lam Dong province and through website.	Site	Reports, suggestions are feasible
Output 17	Plan and establish intensive grazing pastures management for ethnic minority in Village 7, Dac Lua commune, Tan Phu district, Dong Nai province	At least 5 ha of intensive grazing pastures has been set up and managed in Village 7, Dac Lua Commune, Tan Phu District, Dong Nai province.	Selected sites near water sources, grazing, number of cattle	Stable and long-term grazing pastures
Q.1	Identify the grazing pasture's location and community participant profiling	5 ha of grazing pasture's location has been identified by Quarter 1 of 2022.	Ha	Reports, suggestions are feasible
Q.2	Choose to purchase the grasses varieties, set up and manage grazing pastures	Grass varieties have been purchased by Quarter 2 of 2022 to set up and manage 5 ha of grazing pasture.	Ha	Reports, suggestions are feasible
Q.3	Support HH to change the mode of cattle grazing	In 2022, at least 20 households have been supported to change the mode of cattle grazing.	Household	Reports, suggestions are feasible
Output 18	Develop and promote homestay model in Nam Cat Tien commune, Tan Phu district, Dong Nai province in accordance with local customs and practices as a tourism-based alternative livelihood	A successful homestay model in Nam Cat Tien commune, Tan Phu district, Dong Nai province in accordance with local customs and practices as a tourism-based alternative livelihood has been developed and duplicated to other potential communes.	Compare income of HH before and after project	Local people have higher income, good livelihoods
R.1	Assess the needs of training on CBT knowledge and skills for HHs and local guiders	An assessment report on the needs of training on CBT knowledge and skills for households and local guiders has been produced by Quarter 1 of 2022.	Report	Reports, suggestions are feasible
R.2	Develop training materials and invite experts	A set of materials used in training with high qualified experts has been developed by Quarter 1 of 2022.	Set	Trainees have been improved capacity
R.3	Organize training courses on CBT knowledge and skills for HHs and local guiders	Two training courses on CBT knowledge and skills in which one course for 20 households and one course for 20 local guiders has been organized in Quarter 3 of 2022.	Report and recommendation	Trainees have been improved capacity

[Attachment-A]

	Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
R.4	Based on the homestay houtholders available for selection and participants. Support the homestay model suitable to the customs of the local people	Six homestay models suitable to the customs of local people has been supported 02 models in 2022; 02 models in 2023 and 02 models in 2024	Model	Households' income improved
R.5	Cooperate and associate with CTNP, domestic and foreign enterprises Tour Operators	From 2022 to 2025, CTNP has cooperated and signed 10 contracts with 5 households and 2 tour operators. (3 contracts in 2022; 3 contracts in 2023; 2 contracts in 2024 and 2 contracts in 2025)	Contract	Households' income improved
R.6	Replicate the model to other potential communes	From 2024 to 2025, the homestay model has been replicated to Ta Lai commune.	Model	Households' income improved
	Project management			
	CTNP has 90 km length Dong Nai River as a natural boundary. We should purchase the moto boat and water moto bike for patrolling. Motor boat (one motor boat with engine).	A set of a motor boat with engine would be purcharged by Quarter 4 of 2021	Set	Forest patrolling capacity has been improved
	Water motorbike	Four (04) water motorbike would be purcharged in Quarter 2 and Q3 of 2022	Set	Forest patrolling capacity has been improved
	Fly Camera	Five (05) fly camera (drone) would be purcharged in Quarter 4 of 2021	Set	Forest patrolling capacity has been improved
	Motorbike	Seven (07) motorbike would be purcharged in quarter 3 and 4 of 2021.	Set	Forest patrolling capacity has been improved

1.4. Justification

CTNP is an immense valuable natural treasure of scientific, economic, social and environmental to people and contributes to the socio-economic development of the locality.

According to biodiversity conservation concept, people are an inseparable part of the forest ecosystem. Therefore, local communities should play a role in forest and biodiversity protection based on laws and regulations and indigenous knowledge. They should be encouraged to participate in developing plans for biodiversity management and protection, fostering a sense of shared ownership of and responsibility for the forest, and benefit from project activities and ecotourism resources.

In order to conserve the forest ecosystem, the first strategic meaningful action is to build sustainable community both in the core zone and buffer zone. It needs to support them to high awareness and improved livelihoods which are efficient and resilient to climate change.

The best solution to increased forest protection is thus to effectively improve the socio-economic life of the communities in CTNP. Low levels of education and high poverty are the main reasons for the failure of forest protection.

The summary of the problems to be solved in the Table 3.

Table 3 – The problems to be addressed

Key problems	How	Beneficiaries	Achievements
Unsecured livelihood, low income	Improve livelihoods, increase, high-yield crop trees	Village 3, Village 4, Phuoc Cat 2 commune	At least 20 hectares, 50 HH
Support to find output for agricultural products	Display products at exhibitions, fairs, conferences	Village 3, Village 4, Phuoc Cat 2 commune	At least 3 sites in the district and 5 sites in Da Lat City
Unmanaged cattle grazing	Planning, designing pastures and technical guidelines for grazing	Village 7, Dac Lua commune	At least 5 ha, 20 HH
Lack of CBT skills	Training	CBT HH at Nam Cat Tien commune	HH have improved knowledge, business skills
Conservation awareness of local officers constrained	Develop material Training, workshop, study tours	DONRE, DARD, DOST of Dong Nai, Lam Dong province, districts, communes	At least 80 people and 80% of district and commune leaders. Improve coordination mechanism of protection
The conservation capacity of CTNP constrained	Develop a material Training, workshop, study tours	Rangers, science staffs of CTNP	15 people/course/ 3 days
	Monitoring key sps.	CTNP	At least 5 sps/year

Key problems	How	Beneficiaries	Achievements
The wetland habitat is exotic invasive, narrowed	Controlling <i>Mimosa pigra</i> in Bird Lake, floating vegetation in Crocodile Lake, cutting grasses for ungulates in Nui Tuong	CTNP	Improved habitat
Climate change and social impact to biodiversity	Building data base	CTNP	Data base software
	Training for community adapt to climate change	Community in Project zone	2 classes*40 HH
	Building Yellow Camelia model	CTNP	5 ha
	Collecting orchids and Green House	CTNP	At least 50 sps.
Improve the cooperation mechanism of local authorities with CTNP	Review cooperation regulations with local authorities HH signing a commitment paper for forest protection	CTNP, local authorities, HH	100% of adjacent communes. At least 70% of HH signing

2. Objectives

2.1. Main objectives (development objectives)

Object 1: To improve knowledge and information sharing on biodiversity of forest ecosystems of the Park for local managers and policy makers;

Object 2: To assess the climate change and social impacts on CTNP biodiversity and integrated management measures, improve management and conservation capacities of project stakeholders, and to engage local communities for forest management and protection;

Object 3: To conduct piloting of models for sustainable livelihood improvement of communities in the buffer zones.

2.2. Specific objective(s) and success criteria & indicators

Objective 1. To improve knowledge and information sharing on biodiversity of forest ecosystems of the Park for local managers and policy makers.

- At least 80 officers from the DONRE, DARD, DOST of Dong Nai, Lam Dong and Binh Phuoc Provinces can be participated in trainings.

- At least 80% Leaders of district and commune in buffer zone can participate in short-term training courses for awareness raising on biodiversity conservation and adaptation with local climate change measures.

Objective 2. To assess the climate change and social impacts on CTNP biodiversity and integrated management measures, improve management and conservation capacities of project stakeholders, and to engage local communities for forest management and protection;

- An assesment report on current status of climate change and social impacts on the

biodiversity of CTNP.

- At least 2 training courses on climate change and social impacts for people and local authorities in the buffer zone.
- At least 80 local HH will be participated the climate change and social impact adaptation training courses (changing cultivation methods, practices for local people in buffer zone to adapt to climate changes).
- At least 3 wetland areas in the Park have been improved (expected to control *Mimosa pigra* 10-15 ha/year in Bird Lake; Floating vegetation 5 ha/year in Crocodile Lake; Controlling grasses in Nui Tuong grassland 50 ha/year).
- At least 20 HH are supported to change cultivate practices to adapt to climate change.
- Develop model of 5 hectares of Golden Tea plantation (*Camellia spp.*) in Nui Tuong area, **1,200 trees (240 trees/ha)**. After 4 years for buds harvesting.
- Collection of the Park's orchids species (Orchidaceae) and greenhouse for diverse of orchid genus resources conservation in CTNP. At least 50 species of orchids will be collected.
- Develop a set of material, tools and applications to enhance conservation capacity.
- 100% of Park's adjacent communes will sign on to forest coordination regulations on the Park protection; At least 70% of HH in communes buffer zone signing commitment forest protection.
- Annual report on monitoring at least 5 endangered and rare species of 1) Aves such as Waterbirds, Phasianidae, and Bucerotidae, 2) Mammalia such as Gaur (*Bos gaurus*), Asian elephant (*Elephas maximus*), Primates, Small Carnivores.
- At least 2 training courses on forest protection skills engaged with biodiversity monitoring.
- At least 50 students will participate in training courses on the forest protection skills engaged with biodiversity monitoring.
- Study tours in NPs, NRs and workshops (At least 15 people out-bound and 3 trips*15 people in-bound)
- At least 80% staffs of Science Department and Forest Protection Department will be participated in the forest protection capacity -training courses.

Objective 3. To conduct piloting of models for sustainable livelihood improvement of communities in the buffer zones

- Report on economic development potential and benefits in the future for the Park and local community
- At least 2 workshops to identify the economic benefits of biodiversity conservation engaged with improving the livelihoods of people in buffer zone.
- Improving livelihoods for ethnic minority in Village 3 and Village 4 (Phuoc Cat 2 commune, Cat Tien district, Lam Dong province). Support the high quality cashew nut, durian, avocado trees for intercropping, replacing the old and low productivity crops. At least 50 HH will be involved.
- Improve the livelihood of ethnic minority in Village 7, Dac Lua commune, Tan Phu district, Dong Nai province. Support the planning and establishing intensive grassland management. At least 20 HH participated. At least 20 hectares of grazing will be planting.

[Attachment-A]

- Support to develop a homestay model in Nam Cat Tien communes, 1 training course on CBT knowledge and skills. At least 15 HH will be participated. Training at least 15 local guiders. At least 5 HHs and 2 companies will be cooperated with CTNP.

A comparative method will be used to analyze the project impact (before and after or with and without projects) according to the following criteria:

- Awareness and capacity on biodiversity conservation and climate change of provincial, district and commune officials on biodiversity conservation and climate change has been improved.
- Forest ecosystems and forest resources are safely protected.
- Habitat of wetlands is improved. The number of species and individuals of water birds is increasing every year
- The number of violations is reduced by about 5%/year. No cases of violations causing damage to forest fauna and flora (deforestation, logging, hunting).
- Cooperating with local people and local governments closely, 100% of communes have regulations on coordination to protect forests between forestry companies and local authorities, and 100% of HH living along forests have a commitment to protect forests.
- Number of beneficiaries in the project had been achieved. Income of HH increasing by about 10%/year.
- Expanding the model after the project for the non-beneficiary HH for planting husbandry, CBT development from VDF.
- Using the PRISM toolkit for future evaluation of park conservation projects <<https://conservationevaluation.org/>>.

SECTION C. DESCRIPTION OF PROJECT INTERVENTIONS

1. Work Plan and Schedule

Outputs	Performance Indicator	Responsible Person/ Body	Annual Timeline																Remark
			2021		2022				2023				2024				2025		
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
Objective 1. To improve knowledge and information sharing on biodiversity of forest ecosystems of the Park for local managers and policy makers																			
Output 1. Training, sharing knowledge, experiences and skills on biodiversity conservation to the Province, District, Commune Officers																			
<i>A.1. Assess the needs of biodiversity training for local policy makers and managers</i>	<i>Report</i>	<i>Consultant</i>				x													
<i>A.2. Develop training materials and invite experts based on results of needs assessment</i>	<i>Set</i>	<i>Consultant</i>		x		x													
<i>A.3. Organize training courses for staffs of DONRE, DARD, DOST of 2 provinces of Dong Nai, Lam Dong, districts and communes in the buffer zone</i>	<i>Course</i>	<i>Consultant</i>					x			x									
Output 2. Study tour in national parks and protected areas inbound and outbound																			
<i>B.1. Assess the needs and plan of study tour</i>	<i>Report</i>	<i>Consultant</i>								x									
<i>B.2. Develop a study tour plan</i>	<i>Plan</i>	<i>Consultant</i>								x									
<i>B.3. Organize a study tour to NPS and NRs inbound</i>	<i>Study tour</i>	<i>Consultant</i>									x								

Outputs	Performance Indicator	Responsible Person/ Body	Annual Timeline																Remark	
			2021		2022				2023				2024				2025			
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
Objective 2. To assess the climate change and social impacts to CTNP biodiversity and integrated management measures and improve the management and conservation capacities of project stakeholders and engage local communities for forest management and protection																				
Output 3. Assess the climate change and social impacts to the biodiversity of CTNP																				
<i>C.1. Collect and analyze secondary data on climate change and social impacts on biodiversity of CTNP</i>	<i>Report</i>	<i>Consultant</i>		x																
<i>C.2. Conduct survey and assessment of climate change and social impacts to CTNP biodiversity</i>	<i>Report</i>	<i>Consultant</i>		x																
<i>C.3. Develop a database of climate change and social impacts to CTNP biodiversity</i>	<i>Database</i>	<i>Consultant</i>			x															
Output 4. Organize trainings on climate change and social impacts for people and local authorities in the buffer zone																				
<i>D.1. Assess the needs of biodiversity training for local authorities and people</i>	<i>Report</i>	<i>Consultant</i>		x																
<i>D.2. Develop training materials and invite experts</i>	<i>Set</i>	<i>Consultant</i>		x																
<i>D.3. Organize training courses for local authorities and people in the buffer zone of 3 communes: Phuoc Cat 2, Dac Lua and Nam Cat Tien</i>	<i>Course</i>	<i>Consultant</i>		x				x									x		x	

Outputs	Performance Indicator	Responsible Person/ Body	Annual Timeline																Remark
			2021		2022				2023				2024				2025		
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
Output 5. Implement measures and solutions to minimize negative impacts of climate change and social impacts at CTNP (i.e. improving the habitat of Ramsar-Crocodile Lake and neighbouring wetland)																			
<i>E.1. Assess solutions to minimize negative impacts of climate change and social impacts on CTNP by consultants.</i>	Report	Consultant		x															
<i>E.2. Choose the appropriate solutions</i>	Workshop	Consultant		x															
<i>E.3. Improve habitat of Ramsar-Crocodile Lake</i>	Ha/year	Cat Tien NP	x				x				x				x				x
<i>E.4. Control Mimosa pigra at Bird Lake</i>	Ha/year	Cat Tien NP		x				x				x				x			x
<i>E.5. Improve grassland for ungulate in Nui Tuong</i>	Ha/year	Cat Tien NP		x				x				x				x			x
Output 6. Enhance local communities' capacity to adapt with climate change and social impacts (i.e. changing cultivation methods, practices for local people in buffer zone to adapt to climate change)																			
<i>F.1. Assess the needs of capacity building for local communities to adapt to climate change and social impacts</i>	Report	Consultant		x															
<i>F.2. Develop training materials and invite experts</i>	Set	Consultant			x	x													
<i>F.3. Organize training courses on capacity building for local communities to adapt to climate change and social impacts</i>	Course	Consultant						x	x										
Output 7. Develop a model of planting Golden Camellia (<i>Camellia spp.</i>)																			

Outputs	Performance Indicator	Responsible Person/ Body	Annual Timeline																Remark
			2021		2022				2023				2024				2025		
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
<i>G.1. Survey the potential and situation to build a model of planting Golden Camellia</i>	<i>Report</i>	<i>Consultant</i>		x															
<i>G.2. Develop a technical plan for planting and maintaining model of Golden Camellia plantation</i>	<i>Plan</i>	<i>Cat Tien NP</i>		x															
<i>G.3. Develop and maintain plantation model for the first 5 years</i>	<i>Model</i>	<i>Cat Tien NP</i>		x	x	x		x				x				x		x	
<i>G.4. Conduct fire prevention and anti-pests and diseases in the first 4 years</i>	<i>Year</i>	<i>Cat Tien NP</i>		x	x			x	x	x		x	x			x			
<i>G.5. Develop of product branding</i>	<i>Product</i>	<i>Consultant</i>										x				x		x	
Output 8. Collect orchids (Orchidaceae) and set up a greenhouse for orchid genus resource conservation at CTNP.																			
<i>H.1. Survey potential and situation to build an orchid collection model</i>	<i>Report</i>	<i>Consultant</i>	x	x															
<i>H.2. Conduct inventory and collection of local orchids species</i>	<i>Species</i>	<i>Consultant</i>	x	x	x	x	x	x											
<i>H.3. Design and build a system of orchid greenhouses and the grid house</i>	<i>System</i>	<i>Cat Tien NP</i>			x	x	x	x											
<i>H.4. Purchase equipment and supplies for the greenhouse system</i>	<i>Set</i>	<i>Cat Tien NP</i>			x	x	x	x	x	x	x								
<i>H.5. Maintain greenhouse system</i>	<i>Year</i>	<i>Cat Tien NP</i>				x				x				x				x	
Output 9. Develop supporting documents, materials and tools to improve conservation capacity																			
<i>I.1. Prepare a plan supporting documents, materials and tools (patrolling, wildlife monitoring, educating communities in forest protection, handling violators and handbooks for rangers and communities) to improve conservation capacity</i>	<i>Plan</i>	<i>Consultant</i>			x														

[Attachment-A]

Outputs	Performance Indicator	Responsible Person/ Body	Annual Timeline														Remark		
			2021		2022				2023				2024					2025	
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		Q1	Q2
<i>I.2. Contract experts</i>	<i>Person</i>	<i>Consultant</i>			x														
<i>I.3. Compile documents and materials</i>	<i>Set</i>	<i>Consultant</i>			x	x	x	x											
<i>I.4. Organize workshop on reviewing documents</i>	<i>Workshop</i>	<i>Consultant</i>							x										
<i>I.5. Submit supporting documents and materials to competent authority for censoring and licensing</i>	<i>Time</i>	<i>Consultant</i>										x							
<i>I.6. Design, print, publish, circulate supporting documents and materials</i>	<i>Set</i>	<i>Consultant</i>											x	x					
Output 10. Organize trainings on forest protection skills associated with biodiversity monitoring, focusing on waterbirds, Phasianidea, Hornbills, large mammals, and small carnivores. Monitor some rare species by remote sensing technology by consultants, and monitor key species by CTNP																			
<i>J.1. Assess training needs</i>	<i>Report</i>	<i>Consultant</i>	x																
<i>J.2. Develop training materials and invite experts</i>	<i>Set</i>	<i>Consultant</i>	x																
<i>J.3. Organize training courses</i>	<i>Course</i>	<i>Consultant</i>	x																
<i>J.4. Monitor key species</i>	<i>Report</i>	<i>Consultant</i>		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Output 11. Organize trainings on forest patrolling, use of patrol equipment (maps, compass, GPS). Develop plans and methods for patrolling, skills of communication and education, management of violators in the community. The participants would be Park's rangers and scientific staffs.																			
<i>K.1. Assess and survey the needs of training on forest protection patrol, skills</i>	<i>Report</i>	<i>Consultant</i>		x															

[Attachment-A]

Outputs	Performance Indicator	Responsible Person/ Body	Annual Timeline																Remark
			2021		2022				2023				2024				2025		
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
<i>of using equipment for rangers</i>																			
<i>K.2. Develop training materials and invite experts</i>	<i>Set</i>	<i>Consultant</i>			x	x	x												
<i>K.3. Organize the training courses on forest patrolling and protection, skills of using equipment for rangers</i>	<i>Course</i>	<i>Consultant</i>						x											
<i>K.4. Organize training courses on developing forest protection patrolling plan and method, communication education skills, management of violators in the community.</i>	<i>Course</i>	<i>Consultant</i>						x											
Output 12. Develop coordination regulations on forest protection with local authorities, sign commitments on forest protection with households (without community forest protection committee establishment)																			
<i>L.1. Review and update coordination regulations on forest protection, contents of cooperation with local authorities and commitments of HH</i>	<i>Report</i>	<i>Cat Tien NP</i>		x															
<i>L.2. Finalize coordination regulations on forest protection, contents of cooperation with local authorities and commitments of HH</i>	<i>Commune</i>	<i>Cat Tien NP</i>		x															
<i>L.3. Disseminate coordination regulations on forest protection</i>	<i>District</i>	<i>Cat Tien NP</i>			x														
<i>L.4. Implement and evaluate coordination regulations, commitments of HH</i>	<i>Report</i>	<i>Cat Tien NP</i>			x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Output 13. Study tours and workshop inbound and outbound to NPs, NRs Participants would be Park's staffs and Leaders of communes, districts.																			

Outputs	Performance Indicator	Responsible Person/ Body	Annual Timeline																Remark
			2021		2022				2023				2024				2025		
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
<i>M.1. Select a location and planning study tour</i>	<i>Report</i>	<i>Cat Tien NP</i>					x												
<i>M.2. Study tours, seminars and workshops to NPs, NRs inbound</i>	<i>Study tour</i>	<i>Consultant</i>					x			x									
<i>M.3. Study tours, seminars and workshops to NPs, NRs outbound</i>	<i>Study tour</i>	<i>Consultant</i>						x			x								
Objective 3. To conduct pilot models for sustainable livelihood improvement of communities in the buffer zone																			
Output 14. Survey and assess the benefits and potentials of economic development in the future of the Park and local community																			
<i>N.1. Develop a plan for surveying and assessing the benefits and potentials of economic development in the future of the Park and local community</i>	<i>Plan</i>	<i>Consultant</i>			x														
<i>N.2. Conduct survey and assessment</i>	<i>Report</i>	<i>Consultant</i>			x	x	x	x											
Output 15. Identify economic benefits of biodiversity conservation engaged with improving livelihoods for local people in the buffer zone. Participants would be community members. They would participate the workshops, meetings for decision making (both of planning and implementing)																			
<i>O.1. Consult technical experts on identifying economic benefits of biodiversity conservation engaged with improving livelihoods for local people in the buffer zone</i>	<i>Expert</i>	<i>Consultant</i>				x													

Outputs	Performance Indicator	Responsible Person/ Body	Annual Timeline																Remark
			2021		2022				2023				2024				2025		
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
<i>O.2. Organize workshop on identifying economic benefits of biodiversity conservation engaged with improving livelihoods for local people in the buffer zone</i>	<i>Workshop</i>	<i>Consultant</i>					x												
Output 16. Support the planting, maintenance and marketing of high value tree crops (cashew-nut, durian, avocado) to help improve the livelihoods of ethnic minorities in Village 3 and Village 4 of Phuoc Cat 2 commune																			
<i>P.1. Use PRA methodology for identification of locations and participants and profiling.. Support high value trees to help improve livelihoods of ethnic minorities Village 3 and Village 4, Phuoc Cat 2 Commune</i>	<i>Ha</i>	<i>Consultant</i>				x													
<i>P.2. Organize trainings on skills and knowledge for HH on planting and maintaining techniques, sustainable production development, clean agricultural production of specific local products, associated with CBT</i>	<i>Course</i>	<i>Cat Tien NP</i>			x														
<i>P.3. Support marketing of high value agricultural products through supply demand conferences, fairs, exhibitions, and consideration of consumption patterns of agricultural products in the provinces</i>	<i>Site</i>	<i>Cat Tien NP</i>															x		
Output 17. Plan and establish intensive grazing pastures management for ethnic minority in Village 7, Dac Lua commune, Tan Phu district, Dong Nai province																			

[Attachment-A]

Outputs	Performance Indicator	Responsible Person/ Body	Annual Timeline																Remark
			2021		2022				2023				2024				2025		
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
<i>Q.1. Identify the grazing pasture's location and community participant profiling</i>	<i>Ha</i>	<i>Cat Tien NP</i>			x														
<i>Q.2. Choose to purchase the grasses varieties, set up and manage grazing pastures</i>	<i>Ha</i>	<i>Consultant</i>				x													
<i>Q.3. Support HH to change the model of cattle grazing</i>	<i>HH</i>	<i>Cat Tien NP</i>					x	x											
Output 18. Develop and promote homestay model in Nam Cat Tien commune, Tan Phu district, Dong Nai province in accordance with local customs and practices as a tourism-based alternative livelihood																			
<i>R.1. Assess the needs of training on CBT knowledge and skills for HHs and local guiders</i>	<i>Report</i>	<i>Consultant</i>			x														
<i>R.2. Develop training materials and invite experts</i>	<i>Set</i>	<i>Consultant</i>			x														
<i>R.3. Based on the homestay housholders available for selection and participants. Organize training courses on CBT knowledge and skills for HHs and local guiders</i>	<i>Course</i>	<i>Consultant</i>					x												
<i>R.4. Support the homestay model suitable to the customs of the local people</i>	<i>Model</i>	<i>Cat Tien NP</i>			x	x	x	x	x	x	x	x	x	x	x	x			
<i>R.5. Cooperate and associate with CTNP, domestic and foreign enterprises Tour Operators</i>	<i>Contract</i>	<i>Cat Tien NP</i>			x	x	x	x	x	x	x	x	x	x	x	x	x	x	
<i>R.6. Replicate the model to other potential communes</i>	<i>Model</i>	<i>Cat Tien NP</i>			x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Project management																			
<i>1. Travel</i>	<i>Year</i>	<i>Cat Tien NP</i>	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	

[Attachment-A]

Outputs	Performance Indicator	Responsible Person/ Body	Annual Timeline																Remark
			2021		2022				2023				2024				2025		
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
2. Communication	Year	Cat Tien NP	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
3. Report	Year	Cat Tien NP	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
4. Audit	Year	Cat Tien NP			x					x				x				x	
5. Monitoring and evaluation	Year	Cat Tien NP			x					x				x				x	
6. PSC and PMU meetings	Meeting	Cat Tien NP	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
7. Workshops (inception, closing and annual evaluation workshops)	Workshop	Cat Tien NP	x						x				x				x		x
8. Interpreter	Person	Cat Tien NP	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
9. Patrolling vehicle (water motorbike, motor boat)	Person	Cat Tien NP																	
Motor boat (one motor boat in with engine)	Set	Consultant	x	x															
Water motorbike	Set	Consultant				x	x												
Fly camera	Set	Consultant	x	x															
Motorbike	Set	Consultant	x	x															

2. Budget (USD)

2.1. AFoCO Funding

Activity	Unit	Unit cost	Qty	Total (USD)	Budget allocation by year (USD)					Remark
					2021	2022	2023	2024	2025	
Objective 1. To improve knowledge and information sharing on biodiversity of forest ecosystems of the Park for local managers and policy makers				40.000		15.000	25.000			
Output 1. Training, sharing knowledge, experiences and skills on biodiversity conservation to the Province, District, Commune Officers				20.000		15.000	5.000			
<i>A.1. Assess the needs of biodiversity training for local policy makers and managers</i>	<i>Report</i>	<i>5.000</i>	<i>1</i>	<i>5.000</i>		<i>5.000</i>				
<i>A.2. Develop training materials and invite experts based on results of needs assessment</i>	<i>Set</i>	<i>5.000</i>	<i>1</i>	<i>5.000</i>		<i>5.000</i>				
<i>A.3. Organize training courses for staffs of DONRE, DARD, DOST of 2 provinces of Dong Nai, Lam Dong, districts and communes in the buffer zone</i>	<i>Course</i>	<i>5.000</i>	<i>2</i>	<i>10.000</i>		<i>5.000</i>	<i>5.000</i>			
Output 2. Study tour in national parks and protected areas inbound and outbound				20.000			20.000			
<i>B.1. Assess the needs and plan of study tour</i>	<i>Report</i>	<i>5.000</i>	<i>1</i>	<i>5.000</i>			<i>5.000</i>			
<i>B.2. Develop a study tour plan</i>	<i>Plan</i>	<i>5.000</i>	<i>1</i>	<i>5.000</i>			<i>5.000</i>			
<i>B.3. Organize a study tour to NPS and NRs inbound</i>	<i>Study tour</i>	<i>10.000</i>	<i>1</i>	<i>10.000</i>			<i>10.000</i>			
Objective 2. To assess the climate change and social impacts to CTNP biodiversity and integrated management measures and improve the management and conservation capacities of project stakeholders and engage local communities for forest management and protection				500.000	178.000	159.500	77.500	48.100	36.900	
Output 3. Assess the climate change and social impacts to the biodiversity of CTNP				20.000	12.500	5.000	2.500	0	0	
<i>C.1. Collect and analyze secondary data on climate change and social impacts on</i>	<i>Report</i>	<i>2.500</i>	<i>2</i>	<i>5.000</i>	<i>2.500</i>		<i>2.500</i>			

[Attachment-A]

Activity	Unit	Unit cost	Qty	Total (USD)	Budget allocation by year (USD)					Remark
					2021	2022	2023	2024	2025	
<i>biodiversity of CTNP</i>										
<i>C.2. Conduct survey and assessment of climate change and social impacts to CTNP biodiversity</i>	<i>Report</i>	<i>10.000</i>	<i>1</i>	10.000	<i>10.000</i>					
<i>C.3. Develop a database of climate change and social impacts to CTNP biodiversity</i>	<i>Database</i>	<i>5.000</i>	<i>1</i>	5.000		<i>5.000</i>				
Output 4. Organize trainings on climate change and social impacts for people and local authorities in the buffer zone				20.000	12.000	2.000	2.000	2.000	2.000	
<i>D.1. Assess the needs of biodiversity training for local authorities and people</i>	<i>Report</i>	<i>5.000</i>	<i>1</i>	5.000	<i>5.000</i>					
<i>D.2. Develop training materials and invite experts</i>	<i>Copy</i>	<i>100</i>	<i>50</i>	5.000	<i>5.000</i>					
<i>D.3. Organize training courses for local authorities and people in the buffer zone of 3 communes: Phuoc Cat 2, Dac Lua and Nam Cat Tien</i>	<i>Course</i>	<i>2.000</i>	<i>5</i>	10.000	<i>2.000</i>	<i>2.000</i>	<i>2.000</i>	<i>2.000</i>	<i>2.000</i>	
Output 5. Implement measures and solutions to minimize negative impacts of climate change and social impacts at CTNP (i.e. improving the habitat of Ramsar-Crocodile Lake and neighbouring wetland)				120.000	36.000	21.000	21.000	21.000	21.000	
<i>E.1. Assess solutions to minimize negative impacts of climate change and social impacts on CTNP</i>	<i>Report</i>	<i>10.000</i>	<i>1</i>	10.000	<i>10.000</i>					
<i>E.2. Choose the appropriate solutions</i>	<i>Workshop</i>	<i>5.000</i>	<i>1</i>	5.000	<i>5.000</i>					
<i>E.3. Improve habitat of Ramsar-Crocodile Lake</i>	<i>Ha/year</i>	<i>3.000</i>	<i>5</i>	15.000	<i>3.000</i>	<i>3.000</i>	<i>3.000</i>	<i>3.000</i>	<i>3.000</i>	
<i>E.4. Control Mimoso pigra at Bird Lake</i>	<i>Ha/year</i>	<i>1.500</i>	<i>10</i>	15.000	<i>3.000</i>	<i>3.000</i>	<i>3.000</i>	<i>3.000</i>	<i>3.000</i>	
<i>E.5. Improve grassland for ungulate in Nui Tuong</i>	<i>Ha/year</i>	<i>1.500</i>	<i>50</i>	75.000	<i>15.000</i>	<i>15.000</i>	<i>15.000</i>	<i>15.000</i>	<i>15.000</i>	

[Attachment-A]

Activity	Unit	Unit cost	Qty	Total (USD)	Budget allocation by year (USD)					Remark
					2021	2022	2023	2024	2025	
Output 6. Enhance local communities' capacity to adapt with climate change and social impacts (i.e. changing cultivation methods, practices for local people in buffer zone to adapt to climate change)				50.000	12.000	23.000	15.000	0	0	
<i>F.1. Assess the needs of capacity building for local communities to adapt to climate change and social impacts</i>	<i>Report</i>	<i>12.000</i>	<i>1</i>	12.000	<i>12.000</i>					
<i>F.2. Develop training materials and invite experts</i>	<i>Copy</i>	<i>100</i>	<i>80</i>	8.000		<i>8.000</i>				
<i>F.3. Organize training courses on capacity building for local communities to adapt to climate change and social impacts</i>	<i>Course</i>	<i>15.000</i>	<i>2</i>	30.000		<i>15.000</i>	<i>15.000</i>			
Output 7. Develop a model of planting Golden Camellia (<i>Camellia spp.</i>)				50.000	18.500	9.500	6.500	13.100	2.400	
<i>G.1. Survey the potential and situation to build a model of planting Golden Camellia</i>	<i>Report</i>	<i>5.000</i>	<i>1</i>	5.000	<i>5.000</i>					
<i>G.2. Develop a technical plan for planting and maintaining model of Golden Camellia plantation</i>	<i>Plan</i>	<i>1.000</i>	<i>1</i>	1.000	<i>1.000</i>					
<i>G.3. Develop and maintain plantation model for the first 5 years</i>	<i>Model</i>	<i>5.000</i>	<i>5</i>	25.000	<i>11.000</i>	<i>8.000</i>	<i>2.000</i>	<i>2.000</i>	<i>2.000</i>	
<i>G.4. Conduct fire prevention and anti-pests and diseases in the first 4 years</i>	<i>Year</i>	<i>1.500</i>	<i>4</i>	6.000	<i>1.500</i>	<i>1.500</i>	<i>1.500</i>	<i>1.500</i>		
<i>G.5. Developing of product branding</i>	<i>Product</i>	<i>13.000</i>	<i>1</i>	13.000			<i>3.000</i>	<i>9.600</i>	<i>400</i>	
Output 8. Collect orchids (Orchidaceae) and set up a greenhouse for orchid genus resource conservation at CTNP.				60.000	7.500	44.000	5.500	1.500	1.500	
<i>H.1. Survey potential and situation to build an orchid collection model</i>	<i>Report</i>	<i>5.000</i>	<i>1</i>	5.000	<i>5.000</i>					
<i>H.2. Conduct inventory and collection of local orchids species</i>	<i>Species</i>	<i>100</i>	<i>50</i>	5.000	<i>2.500</i>	<i>2.500</i>				
<i>H.3. Design and build a system of orchid greenhouses and the grid house</i>	<i>M2</i>	<i>40</i>	<i>900</i>	36.000		<i>36.000</i>				

[Attachment-A]

Activity	Unit	Unit cost	Qty	Total (USD)	Budget allocation by year (USD)					Remark
					2021	2022	2023	2024	2025	
<i>H.4. Purchase equipment and supplies for the greenhouse system</i>	<i>Set</i>	<i>8.000</i>	<i>1</i>	8.000		<i>4.000</i>	<i>4.000</i>			
<i>H.5. Maintain greenhouse system</i>	<i>Year</i>	<i>1.500</i>	<i>4</i>	6.000		<i>1.500</i>	<i>1.500</i>	<i>1.500</i>	<i>1.500</i>	
Output 9. Develop supporting documents, materials and tools to improve conservation capacity				20.000		11.000	6.500	2.500	0	
<i>I.1. Prepare a plan for development of supporting documents, materials and tools patrolling, wildlife monitoring, educating communities in forest protection, handling violators and handbooks for rangers and communities) to improve conservation capacity</i>	<i>Plan</i>	<i>2.000</i>	<i>1</i>	2.000		<i>2.000</i>				
<i>I.2. Contract experts</i>	<i>Person</i>	<i>2.500</i>	<i>2</i>	5.000		<i>5.000</i>				
<i>I.3. Compile documents and materials</i>	<i>Set</i>	<i>4.000</i>	<i>1</i>	4.000		<i>4.000</i>				
<i>I.4. Organize workshop on reviewing documents</i>	<i>Workshop</i>	<i>5.000</i>	<i>1</i>	5.000			<i>5.000</i>			
<i>I.5. Submit supporting documents and materials to competent authority for censoring and licensing</i>	<i>Time</i>	<i>1.500</i>	<i>1</i>	1.500			<i>1.500</i>			
<i>I.6. Design, print, publish, circulate supporting documents and materials</i>	<i>Set</i>	<i>2.500</i>	<i>1</i>	2.500				<i>2.500</i>		
Output 10. Organize trainings on forest protection skills associated with biodiversity monitoring, focusing on waterbirds, Phasianidea, Hornbills, large mammals, and small carnivores. Monitor some rare species by remote sensing technology by consultants, and monitor key species by CTNP				100.000	68.000	8.000	8.000	8.000	8.000	
<i>J.1. Assess training needs</i>	<i>Plan</i>	<i>10.000</i>	<i>1</i>	10.000	<i>10.000</i>					
<i>J.2. Develop training materials and invite experts</i>	<i>Copy</i>	<i>70</i>	<i>500</i>	35.000	<i>35.000</i>					
<i>J.3. Organize training courses</i>	<i>Course</i>	<i>7.500</i>	<i>2</i>	15.000	<i>15.000</i>					
<i>J.4. Monitor key species</i>	<i>Report</i>	<i>8.000</i>	<i>5</i>	40.000	<i>8.000</i>	<i>8.000</i>	<i>8.000</i>	<i>8.000</i>	<i>8.000</i>	

[Attachment-A]

Activity	Unit	Unit cost	Qty	Total (USD)	Budget allocation by year (USD)					Remark
					2021	2022	2023	2024	2025	
Output 11. Organize trainings on forest patrolling, use of patrol equipment (maps, compass, GPS). Develop plans and methods for patrolling, skills of communication and education, management of violators in the community. The participants would be Park's rangers and scientific staffs.				20.000	2.500	17.500	0	0	0	
<i>K.1. Assess and survey the needs of training on forest protection patrol, skills of using equipment for rangers</i>	<i>Report</i>	<i>2.500</i>	<i>1</i>	2.500	<i>2.500</i>					
<i>K.2. Develop training materials and invite experts</i>	<i>Set</i>	<i>2.500</i>	<i>1</i>	2.500		<i>2.500</i>				
<i>K.3. Organize the training courses on forest patrolling and protection, skills of using equipment for rangers</i>	<i>Course</i>	<i>3.750</i>	<i>2</i>	7.500		<i>7.500</i>				
<i>K.4. Organize training courses on developing forest protection patrolling plan and method, communication education skills, management of violators in the community.</i>	<i>Course</i>	<i>3.750</i>	<i>2</i>	7.500		<i>7.500</i>				
Output 12. Develop coordination regulations on forest protection with local authorities, sign commitments on forest protection with households (without community forest protection committee establishment)				20.000	9.000	7.500	1.500		2.000	
<i>L.1. Review and update coordination regulations on forest protection, contents of cooperation with local authorities and commitments of HH</i>	<i>Report</i>	<i>2.600</i>	<i>1</i>	2.600	<i>2.600</i>					
<i>L.2. Finalize coordination regulations on forest protection, contents of cooperation with local authorities and commitments of HH</i>	<i>Commune</i>	<i>200</i>	<i>32</i>	6.400	<i>6.400</i>					
<i>L.3. Disseminate coordination regulations on forest protection</i>	<i>District</i>	<i>750</i>	<i>8</i>	6.000		<i>6.000</i>				
<i>L.4. Implement and evaluate coordination regulations, commitments of HH</i>	<i>Report</i>	<i>5.000</i>	<i>1</i>	5.000		<i>1.500</i>	<i>1.500</i>		<i>2.000</i>	

Activity	Unit	Unit cost	Qty	Total (USD)	Budget allocation by year (USD)					Remark
					2021	2022	2023	2024	2025	
Output 13. Study tours and workshop inbound and outbound to NPs, NRs Participants would be Park's staffs and Leaders of communes, districts.				20.000	0	11.000	9.000	0		
<i>M.1. Select a location and planning study tour</i>	<i>Report</i>	<i>2.000</i>	<i>1</i>	2.000		<i>2.000</i>				
<i>M.2. Study tours, seminars and workshops to NPs, NRs inbound</i>	<i>Study tour</i>	<i>3.750</i>	<i>2</i>	7.500		<i>3.750</i>	<i>3.750</i>			
<i>M.3. Study tours, seminars and workshops to NPs, NRs outbound</i>	<i>Study tour</i>	<i>5.250</i>	<i>2</i>	10.500		<i>5.250</i>	<i>5.250</i>			
Objective 3. To conduct pilot models for sustainable livelihood improvement of communities in the buffer zones'				270.000	0	188.618	29.908	22.803	28.672	
Output 14. Survey and assess the benefits and potentials of economic development in the future of the Park and local community				10.000	0	10.000				
<i>N.1. Develop a plan for surveying and assessing the benefits and potentials of economic development in the future of the Park and local community</i>	<i>Plan</i>	<i>2.500</i>	<i>1</i>	2.500		<i>2.500</i>				
<i>N.2. Conduct survey and assessment</i>	<i>Report</i>	<i>7.500</i>	<i>1</i>	7.500		<i>7.500</i>				
Output 15. Identify economic benefits of biodiversity conservation engaged with improving livelihoods for local people in the buffer zone. Participants would be community members. They would participate the workshops, meetings for decision making (both of planning and implementing)				20.000		20.000				
<i>O.1. Consult technical experts on identifying economic benefits of biodiversity conservation engaged with improving livelihoods for local people in the buffer zone</i>	<i>Expert</i>	<i>500</i>	<i>8</i>	4.000		<i>4.000</i>				
<i>O.2. Organize workshop on identifying economic benefits of biodiversity conservation engaged with improving livelihoods for local</i>	<i>Workshop</i>	<i>8.000</i>	<i>2</i>	16.000		<i>16.000</i>				

[Attachment-A]

Activity	Unit	Unit cost	Qty	Total (USD)	Budget allocation by year (USD)					Remark
					2021	2022	2023	2024	2025	
<i>people in the buffer zone</i>										
Output 16. Support the planting, maintenance and marketing of high value tree crops (cashew-nut, durian, avocado) to help improve the livelihoods of ethnic minorities in Village 3 and Village 4 of Phuoc Cat 2 commune				110.000	0	90.000			20.000	
<i>P.1. Use PRA methodology for identification of locations and participants and profiling. Support high value trees to help improve livelihoods of ethnic minorities Village 3 and Village 4, Phuoc Cat 2 Commune</i>	<i>Ha</i>	<i>3.500</i>	<i>20</i>	70.000		<i>70.000</i>				
<i>P.2. Organize trainings on skills and knowledge for HH on planting and maintaining techniques, sustainable production development, clean agricultural production of specific local products, associated with CBT</i>	<i>Course</i>	<i>10.000</i>	<i>2</i>	20.000		<i>20.000</i>				
<i>P.3. Support marketing of high value agricultural products through supply demand conferences, fairs, exhibitions, and consideration of consumption patterns of agricultural products in the provinces</i>	<i>Site</i>	<i>2.500</i>	<i>8</i>	20.000					<i>20.000</i>	
Output 17. Plan and establish intensive grazing pastures management for ethnic minority in Village 7, Dac Lua commune, Tan Phu district, Dong Nai province				20.000	0	20.000				
<i>Q.1. Identify the grazing pasture's location</i>	<i>Ha</i>	<i>500</i>	<i>5</i>	2.500		<i>2.500</i>				
<i>Q.2. Choose to purchase the grasses varieties, set up and manage grazing pastures</i>	<i>Ha</i>	<i>2.100</i>	<i>5</i>	10.500		<i>10.500</i>				
<i>Q.3. Support HH to change the mode of cattle grazing</i>	<i>HH</i>	<i>350</i>	<i>20</i>	7.000		<i>7.000</i>				

[Attachment-A]

Activity	Unit	Unit cost	Qty	Total (USD)	Budget allocation by year (USD)					Remark
					2021	2022	2023	2024	2025	
Output 18. Develop and promote homestay model in Nam Cat Tien commune, Tan Phu district, Dong Nai province in accordance with local customs and practices as a tourism-based alternative livelihood				110.000	0	48.618	29.908	22.803	8.672	
<i>R.1. Assess the needs of training on CBT knowledge and skills for HHs and local guiders</i>	<i>Report</i>	<i>1.409</i>	<i>1</i>	<i>1.409</i>		<i>1.409</i>				
<i>R.2. Develop training materials and invite experts</i>	<i>Set</i>	<i>1.409</i>	<i>1</i>	<i>1.409</i>		<i>1.409</i>				
<i>R.3. Based on the homestay housholders available for selection and participants. Organize training courses on CBT knowledge and skills for HHs and local guiders</i>	<i>Course</i>	<i>9.179</i>	<i>2</i>	<i>18.358</i>		<i>18.358</i>				
<i>R.4. Support the homestay model suitable to the customs of the local people</i>	<i>Model</i>	<i>5.217</i>	<i>6</i>	<i>31.304</i>		<i>10.435</i>	<i>10.435</i>	<i>10.435</i>		
<i>R.5. Cooperate and associate with CTNP, domestic and foreign enterprises Tour Operators</i>	<i>Contract</i>	<i>3.410</i>	<i>10</i>	<i>34.100</i>		<i>10.230</i>	<i>10.230</i>	<i>6.820</i>	<i>6.820</i>	
<i>R.6. Replicate the model to other potential communes</i>	<i>Model</i>	<i>23.420</i>	<i>1</i>	<i>23.420</i>		<i>6.777</i>	<i>9.243</i>	<i>5.548</i>	<i>1.852</i>	
Travel	Year	6.000	5	30.000	6.000	6.000	6.000	6.000	6.000	
Consumable items				90.714	46.714	26.000	6.000	6.000	6.000	
<i>Office equipment procurement</i>	<i>Year</i>	<i>4.000</i>	<i>5</i>	<i>20.000</i>	<i>4.000</i>	<i>4.000</i>	<i>4.000</i>	<i>4.000</i>	<i>4.000</i>	
<i>Patrolling vehicle (water motorbike, motor boat)</i>										
<i>Motor boat (one motor boat in with engine)</i>	<i>set</i>	<i>22.500</i>	<i>1</i>	<i>22.500</i>	<i>22.500</i>					
<i>Water motorbike</i>	<i>set</i>	<i>5.000</i>	<i>4</i>	<i>20.000</i>		<i>20.000</i>				
<i>Fly camera</i>	<i>set</i>	<i>1.500</i>	<i>5</i>	<i>7.500</i>	<i>7.500</i>					
<i>Motor Bike</i>	<i>set</i>	<i>1.531</i>	<i>7</i>	<i>10.714</i>	<i>10.714</i>					
<i>Stationery</i>	<i>Year</i>	<i>2.000</i>	<i>5</i>	<i>10.000</i>	<i>2.000</i>	<i>2.000</i>	<i>2.000</i>	<i>2.000</i>	<i>2.000</i>	
Miscellaneous				30.000	6.000	6.000	6.000	6.000	6.000	
<i>Communication</i>	<i>Year</i>	<i>4.000</i>	<i>5</i>	<i>20.000</i>	<i>4.000</i>	<i>4.000</i>	<i>4.000</i>	<i>4.000</i>	<i>4.000</i>	
<i>Auditing</i>	<i>Year</i>	<i>2.000</i>	<i>5</i>	<i>10.000</i>	<i>2.000</i>	<i>2.000</i>	<i>2.000</i>	<i>2.000</i>	<i>2.000</i>	

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Activity	Unit	Unit cost	Qty	Total (USD)	Budget allocation by year (USD)					Remark
					2021	2022	2023	2024	2025	
Management costs				30.000	6.000	6.000	6.000	6.000	6.000	
<i>Monitoring and evaluating</i>	<i>Year</i>	<i>2.000</i>	<i>5</i>	<i>10.000</i>	<i>2.000</i>	<i>2.000</i>	<i>2.000</i>	<i>2.000</i>	<i>2.000</i>	
<i>PSC and PMU meetings</i>	<i>Meeting</i>	<i>4.000</i>	<i>5</i>	<i>20.000</i>	<i>4.000</i>	<i>4.000</i>	<i>4.000</i>	<i>4.000</i>	<i>4.000</i>	
Contingency				20.000					20.000	
Sub-total				1.010.714	242.714	407.118	156.408	94.903	109.572	
Program Support <i>(12% of subtotal * Financial Regulations 3.4)</i>				121.286	29.126	48.854	18.769	11.388	13.149	
Total AFoCO funding				1.132.000	271.840	455.972	175.177	106.291	122.721	

2.2. National contribution of Viet Nam (in-cash)

Activity	Unit	Unit cost	Qty	Total (USD)	Budget allocation by year (USD)					Remark
					2021	2022	2023	2024	2025	
Office				51,000	9,400	9,400	9,400	9,400	13,400	
Interpreter	Year	3,000	5	15,000	3,000	3,000	3,000	3,000	3,000	
Starting project workshop	Set	4,000	1	4,000	4,000					
Closing project workshop	Workshop	4,000	1	4,000					4,000	
Middle workshop	Workshop	4,000	1	4,000			4,000			
Annual evaluation workshops	Workshop	4,000	3	12,000		4,000		4,000	4,000	
Mission allowance, hostel	Year	2,400	5	12,000	2,400	2,400	2,400	2,400	2,400	
Allowance for PMU	Year	9,800	5	49,000	9,800	9,800	9,800	9,800	9,800	
Total				100,000	19,200	19,200	19,200	19,200	23,200	

SECTION D. IMPLEMENTATION ARRANGEMENTS

1. Organizational structure

The VNFOREST (MARD), as a Project Managing Agency, which will assign the Departments to coordinate with CTNP to implement the project effectively and on schedule. These Departments include:

- Department of Management of Special Use Protection and watershed Forests: support professional and conservation skills.
- Department of Science, Technology and International Cooperation: technical consultancy, project management, keeping relationship with donors during the project implementation.
- CTNP is the Project Owner.

Establishment of Project Steering Committee (PSC) (Figure 3)

The PSC aims to direct, guide and supervise project implementation. PSC includes: The Leader of VNFOREST, PSC Head; Director of CTNP, PSC Deputy Head; Representative AFoCO Secretariat, Member; Representative of Tan Phu District People Committee of Dong Nai province, Members; Representative of Cat Tien District People Committee of Lam Dong province, Members.

The PSC operates on part-time basis, which is established by Ministry of Agriculture and Rural Development.

Functions, missions: Direct, operate and approve annual work plans and budgets of the Project Management Unit.

Establishment of Project Management Unit (PMU)

The PMU aims to ensure management and implementation of the project effectively and timely by the Donor and the Vietnamese Government regulations. The PMU includes the CTNP's Deputy Director in charge of Scientific and International Cooperation, and Director of PMU.

PMU Departments: 1) Head of Science and International Cooperation Department, Project Coordinator, in charge of implementing silvicultural and technical research, international cooperation; 2) Head of Planning - Finance Department, Project Accountants, in charge of developing project planning and budgets, reciprocal capital, disbursement procedures; 3) Head of Personnel - Administration Department, Member, in charge of human resources, administration, training, study tours, infrastructure, reports; 4) Director of Center for Environmental Education and Services, Member, in charge of ecotourism development; 5) Director of Center for Rescue and Conservation Species, in charge of wildlife rescue, development of seedling, planting; 6) Permanent Deputy Head of FPD is in charge of forest management and protection, commitment forests for protection and livelihood improvement activities.

Additional staff includes a part-time Project accountant and a full-time technician and interpreter.

PMU works with the community, business owners and partners for increased involvement in the project and engagement of stakeholders in the project activities. The PMU Director is responsible for reporting to the PSC.

Functions and missions of PMU:

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- Under the direct management of the PSC and the VNFOREST according to Vietnamese regulations
- Receiving, managing and using of the project budget in accordance with Vietnamese legal regulations and AFoCO Project Manual.
- Handing over the project achievements to CTNP for management and utilization after testing, accepting and project completion.
- Other missions assigned by the PSC.

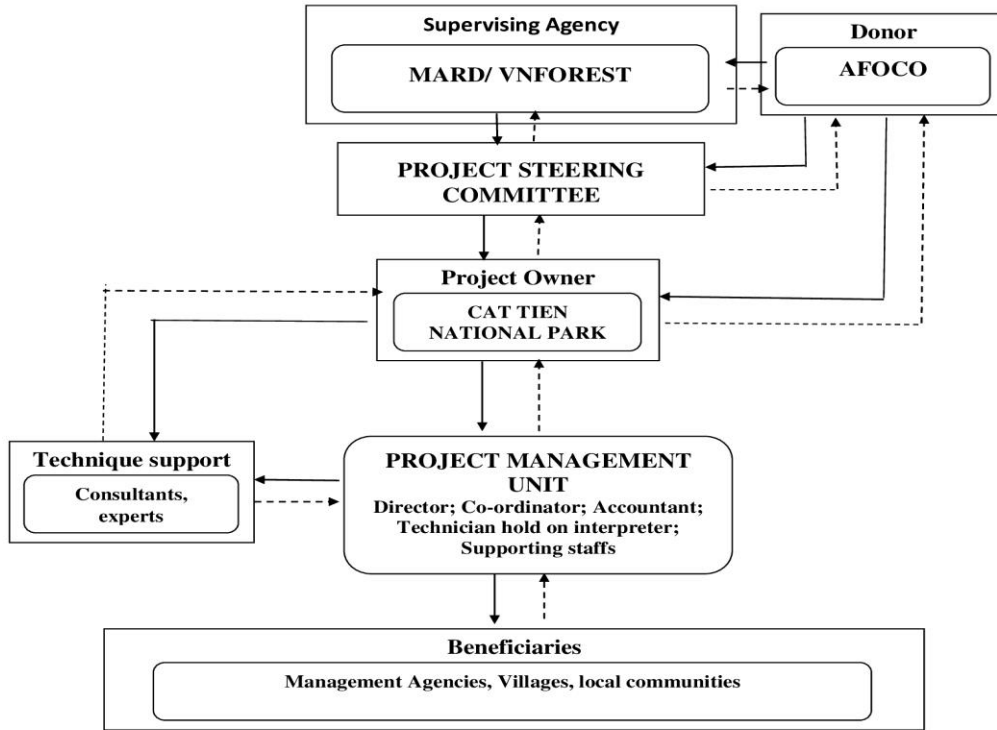
2. Staff resource plan

The PSC included 5 members which is established by Ministry of Agriculture and Rural Development based on consultation with other Agencies. They have professional and experience in working, maintaining good relationships, and are knowledgeable about the terrain. The PMU consists of 9 people:

- The Project Director is a concurrent Deputy Director of CTNP (30% project working time).
- The Project Coordinator is a part-time employee, Head of Science and International Cooperation (40% working time).
- The Chief Accountant of the Project is the Head of the Financial Planning Department (20% working time).
- **The Accountant of the Project is the staff of the Financial Planning Department (50% working time).**
- Head of Personnel, Administration Department (20% working time).
- Director of the Rescue and Conservation of Species (20% working time).
- Director of the Centre for Environmental Education and Services, (20% working time).
- Permanent Deputy Head of FPD (10% working time) (20% working time).
- Technical staff including Interpreter (part time).

The PMU members will attend short-term workshops and training courses to improve the understanding of the project and donor regulations, and apply scientific and technological advances to the project, expanding domestic and international cooperation efficiency.

Figure 3 - Organizational chart



Ghi chú:
—> : Direct, instruction, monitoring
- - -> : Report, Request

3. Reporting and monitoring arrangements

3.1. Project report

The reports must be compiled with the schedule and specified forms of the AFoCO Project Manual.

Periodically reports to the Secretariat on working progress and finance. Reports and supporting documents are sent in hard copy and electronic version. The contents of report include project progress (working done, doing and planning next steps) as well as appropriate pictures and descriptions.

- *Finance reports* are submitted twice a year. The reporting period is from January 1 to June 30 and from July 1 to December 31 (the submission is no later than January 15 and July 15 every year).

Finance reports include cash flow, balance sheets, expenses and in-kind and in-cash contributions. The PMU should also keep all records, payment invoices and supporting documents for financial audits and other verification purposes.

- Mid-year report: Reporting period is from January 1 to June 30 (the submission is no later than July 15 every year).

- Annual report: The reporting period is from January 1 to December 31 every year (the submission is no later than January 31 of the following year).

- Other reports: such as technical reports, procedures and reports before and after organizing events such as seminars, visits. The content includes planning for workshops, visits, lists of participants, content, methods, locations, data or results achieved, effective, and information sharing.

3.2. Project monitoring and evaluation

The objective of project monitoring is to provide regular and timely updates on project implementation as well as to identify any corrective actions needed for effective and efficient implementation of the project.

Monitoring is an annually planned activity and the PMU is responsible for including this activity in the annual work plan and allocating the budget accordingly starting from the second fiscal year. Monitoring shall not be conducted in the final year. Final evaluation will be conducted in accordance with the Final Evaluation plan in the final year.

PSC is responsible for conducting regular project monitoring. The project monitoring team consists of two members, including an external expert and a member nominated by the Secretariat. The Secretariat will propose the monitoring schedule and the Terms of Reference of the monitoring team to the annual PSC meeting. Supervision is carried out one month prior to the annual PSC meeting. If necessary, on-site monitoring will be conducted. A monitoring report should be submitted, in accordance with the procedure and template provided in the guidelines for project monitoring and evaluation, for consideration by the PSC at its regular meeting. Based on the findings and recommendations of the monitoring report, the PSC will decide on the follow-up actions.

3.3. Evaluation

Evaluation of a project will be conducted using the criteria of relevance, effectiveness, efficiency, impact and sustainability. All regular projects will set basic direction and budget for

mid-term, final and ex-post evaluation at the planning stage of the project when designing the project proposal. Evaluation of the project is done by an independent third party and conducted in the form of mid-term, final, and ex-post evaluations.

Table 4 - Timetable of project monitoring

January	Submit annual PMU reports to the Supervisory Experts Team Submit the Supervisory Group's supervision plan to the PSC
February	Supervisory Experts Team to work their missions (except for the first year). Submit supervision reports to the PSC
March	PSC meeting
July	PMU submits Mid-Year Report (Note: July 1 is the kick-off date of AFOCO project)
October	PMU submits the annual plan and budget to the Secretariat according to the project document
November	PSC approves the Annual Plan (in writing).
December	PSC establishes the Supervisory Experts Team and terms of reference. Submit budget plan for Q1 and Q2 of the following year

The purpose of a mid-term evaluation is to draw conclusions and recommendations, based on all factors relevant to the current implementation of the project. The purpose of a final evaluation is to assess how well the project achieved its intended objective, in terms of a summative evaluation at the completion of project implementation. The purpose of an ex-post evaluation is to learn lessons, draw conclusions for future Projects, and identify reasons for success and failure. An evaluation could also provide a comprehensive assessment on the extent of influence of external factors on the implementation of project activities and propose preventive or protective actions.

Based on the observation and findings from the regular reports and any special reports, the Secretariat may identify the needs for additional thematic evaluation which is not included in the project work plan in case (i) there are issues in the problem implementation which demands decisions beyond the PSC, and/or (ii) there is a specific objective such as to collect data and information from the project for development of new activities. The cost for additional evaluation will be covered by the Secretariat.

In all types of evaluation, the Secretariat will form an evaluation team comprising of third-party members. In consultation with the IA and NFP, the evaluation team will develop an evaluation plan, schedule, and structure of the evaluation report and submit them to the Executive Director.

The PMU should provide necessary information such as project documents, reports and an annual work plan for prior-review. The PMU is also responsible for providing logistic support in the case of field visits to the project site(s) and when interviews are held with the stakeholders and other relevant personnel.

4. Risk management and sustainability

4.1. Assumptions and risks

Potential risks during project implementation:

- HH do not have the capacity to participate in the project or do not follow the techniques of

planting and maintenance of special trees

- There are no measures to replace traditional manual to improve wetland habitats.
- Violators do not change their habits or livelihoods and are not willing to change jobs.
- Improving livelihoods required skills and high professionalism, not suitable for violators
- Difficult to market local agricultural products due to low quality.

Table 5 - Assumptions and risks

Major risk factors	Anticipation	Assumptions
HH do not have their capacity to participate in the project	Medium	Collaborate with local authorities to select HH and coordinate with local programs and projects
HH do not follow the techniques of planting and maintenance of special trees	Low	Strengthening monitoring, guidance
No measures to replace traditional manual methods to improve wetland habitats	Medium	Need advices and supports from scientists, institutes and Universities
Improving livelihoods requires skills and high professionalism, not suitable for violators	Low	It takes time to train.
Difficult to market local agricultural products due to low quality	Medium	It is necessary to consult and assist the Agriculture and Forestry Extension Centers of the districts. Strengthening marketing, associating with manufacturing and processing enterprises

4.2. Sustainability

The project is sustainable because:

✓ Viet Nam policies and laws have been strengthened to enhance biodiversity conservation capacity, develop solutions to adapt to climate change, and improve livelihoods for local people in the buffer zone, as well as pay attention to vulnerable groups, associate with Law on Forestry (2017), and develop sustainable development target program, poverty reduction program, and sustainable management of natural resources.

✓ The project uses a bottom-up approach in line with people's expectations.

- The project helps to improve the livelihoods of local people, replaces the monoculture of cashew trees, provides special seedlings, plans for grazing pastures, provides knowledge on developing CBT, increases HH income to help the forest protection effectiveness; Support to find product markets for agriculture, i.e. promotion, associating with TOs, enterprises for agricultural products and eco-tourism development. The project supports purchase of seedlings and training on planting and maintenance techniques; local people will pay for their own labors, fertilizers, herbicide, and pesticides. At the same time, the National Target Programme on Building New-Style Rural Areas for the 2010 – 2020 period will support them annually.

- The achievements originate from the needs and interests of CTNP and communities in the project area. Due to community participation through capital, labor, experience, and indigenous

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knowledge combined with new science and technology, people benefit directly from their achievements.

- The project is deeply humane. It not only focuses on vulnerable groups, education contributes to changing awareness and attitudes of violators, but also helps them to change their livelihoods and increase their incomes. The project's results will certainly be disseminated widely on the media in Viet Nam and abroad, as a pilot model of Vietnam for another NPs researching and learning.

✓ The project addresses urgent issues in the conservation of CTNP.

- The project operation is a favorable opportunity for the Park to have better conditions to harmonize conflict between conservation and development.

- The park's staffs have been improved. The annual biodiversity monitoring results provide information on species richness and number of individuals helping the Park Director adjust appropriate conservation solutions. Habitat has been improved.

- Local people have improved their livelihoods, and have good jobs and stable incomes, thereby reducing pressure on forest resources.

- The Park maintains and strengthens relationships with internal and external agencies and institutions, especially the relationship with the local authorities and people in the sustainable development and conservation at CTNP.

✓ Long-term effectiveness of the project:

- Promoting the initiative, creativity and responsibility of the people for protection.

- The activities are appropriate and feasible given project resources and objectives. The project provides initial seedlings, provides knowledge, techniques and methods to help HH to have favorable conditions to increase their income.

- To be coordinated with other local projects and programs.

✓ Develop and implement regulations on management and effective use of VCF engaged with forest protection and development.

- The HH will contribute a minimum rate of 200.000 VND/HH/year to the VCF from the PFES (minimum for the first 5 years). The HH will contribute quarterly according to the PFES. After 2 years, if the households have a good harvest/production, the contribution rate could increase. The household can only use this fund for maintenance of crops. The fund will be decided by the community in terms of form, object, duration and purpose of lending.

- The beneficiary HH will contribute 10%/year for 2 years compared to the initial investment of project (20% in 2 years) in order to recover the capital of the project gradually. The HH not receiving benefits will lend and rotate the capital to expand the crop area.

The VCF will be started at the same time of the Project in 2020.

For management mechanism: The funds are managed by the community directly. The community assigns the heads of the Commitment Forest villages as the account holders and head of WU as cashier. The funds will be rotated within the community with priority support for households in disadvantaged circumstances including illness and lack of capital for planting and maintenance of crops.

The villages will elect a Supervisory Team to monitor the revenue and expenses of the funds, as

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well as the borrowers and the payment period (under agreement of the CPC). Funds will be reported monthly, quarterly and annual in the community, with meetings reviewed and summarized under the supervision of the Supervisory Team, households, and local authorities.

CTNP will submit a report of pilot project results on effectiveness of using PFES to improve livelihoods of ethnic minority communities in buffer zone to VNFOREST. The report should include the following: how to mobilize, mechanisms of management and use, assessment, recommendations, etc. The report should also include data/information from pilot models such as planting and maintenance, grazing pastures, CBT, and expanded areas from the fund.

Table 6 - Estimation of the VLF development

(1 USD =23,000 VND). Unit: USD

No	Items	2021	2022	2023	2024	2025	2026	Total
A	Contributions							
I	PFES (200.000 VND/HH/year)							4,696
1	Dac Lua (20 HH)	174	174	174	174	174	174	1,043
2	Phuoc Cat 2 (70HH)	609	609	609	609	609	609	3,652
II	Initial investment of project (20% in 2 years)							21,400
1	Dac Lua	700	700					1,400
2	Nam Cat Tien		3000	3000				6,000
3	Phuoc Cat 2		7000	7000				14,000
	Total							26,096
B	Re-investments							
1	Dac Lua		3,500					3,500
2	Phuoc Cat 2		3,500	3,500				7,000
3	Nam Cat Tien				15,596			15,596
	Total		7,000	3,500	15,596			26,096

- Expectation of the expanded areas:

+ Dac Lua commune: 10 HH for grazing and livelihoods development (0.25 ha/HH)

+ Phuoc Cat 2 commune: 02 HH for special tree planting development (0.5 ha/HH)

+ Nam Cat Tien commune: 01 HH/1 model for CBT development

Interest rate: 2,4%/year, approximately 50% the same with rate of the Bank of Poor HH Policy (Decision No.355/QD-Ttg dated April, 01st 2019 of the Prime Minister is 4,8%/year)

Expectation of interest rate is 26,096 USD x 2,4%/year = 626 USD/year using for management expenses, rewarding for good HH, good garden models with high productivity.