

# Project: Eco Hive Guardians

## 1. Introduction

### **Background of the project**

Based near the rainforest area of Nyungwe National Park in Rwanda's Nyamasheke District, the Eco Hive Guardians project appears as a sustainable response to the twin challenges of rural poverty and environmental degradation. At its core, this initiative promotes the power of community aiming to uplift local beekeeping cooperatives while protecting one of Africa's most valuable biodiversity habitats. Recognizing that these communities live in close relationship with the forest, the project looks for to transform their traditional livelihoods into models of sustainability and ecological harmony.

The vision of Eco Hive Guardians is simple yet great: empower local people through modern, eco-conscious beekeeping. By providing cooperatives with the knowledge and tools to adopt hygienic, sustainable practices and meet international packaging standards, the project unlocks new economic opportunities for rural families. But this isn't just about honey, it's about reconceiving the role of beekeepers as stewards of the environment, who both produce income and safeguard the very ecosystems they depend on.

Community ownership is at the heart of this effort. Every step from training sessions to conservation campaigns actively involves local voices, ensuring that solutions are both practical and deeply rooted in cultural understanding. This inclusive approach transforms participants into guardians of their own environment. By weaving together beekeeping with reforestation, anti-poaching advocacy, and ecological education, the project raises a powerful sense of pride and purpose in preserving Nyungwe's rich biodiversity.

Looking ahead, Eco Hive Guardians is also a movement grounded in action, collaboration, and hope. While early stages focus on research and outreach to cooperatives and regulatory bodies, the momentum is building. The project is dedicated to serve as a classroom proving how academic knowledge, local knowledge, and community spirit can be used to protect nature, increase rural economies, and inspire change far beyond Rwanda's borders.

### **Problem statement**

In this region surrounding Nyungwe National Park in Rwanda, local communities rely on beekeeping and farming for survival yet, without sustainable methods, these livelihoods are unintentionally harming the environment they depend on. Deforestation, wildlife conflicts, and unsustainable practices endanger both the ecosystem and the long term wellbeing of these communities. The Eco Hive Guardians project engage as a solution to this pressing problem, aiming to transform traditional beekeeping into a force for good one that not only raise incomes through global market access but also safeguards biodiversity through education, collaboration, and ecofriendly innovation.

### **Objectives (General and Specific)**

The objective of the Eco Hive Guardians project is to empower local beekeeping cooperatives in Nyamasheke District, Rwanda, by providing them with modern, sustainable honey production techniques that enhance their livelihoods while actively contributing to the conservation of Nyungwe National Park.

Specifically, the project aims to build community capacity through inclusive training in ecofriendly beekeeping, hygiene standards, and international packaging protocols; provide access to tools and knowledge needed to compete in global markets; reduce environmental threats like deforestation and poaching through education and advocacy; and raise a model of community led ecological guardianship that transforms academic knowledge into real world impact.

### **Significance of the project**

The Eco Hive Guardians project holds deep significance as it bridges the gap between community livelihoods and environmental guardianship in Rwanda's Nyamasheke District. This initiative empowers local beekeepers not only to improve their work and access to global markets, but to become protectors of their environment. By combining traditional knowledge with modern techniques, the project transforms everyday community members into guardians of biodiversity reducing harmful practices, preventing wildlife conflict, and support a culture of ecological responsibility. In doing so, it uplifts rural lives while ensuring the long term health of one of Africa's most valuable rainforests.

## **2. Project Description**

### **Description of the project concept**

Eco Hive Guardians is a community powered initiative operates in Rwanda's Nyamasheke District, designed to uplift local beekeepers while promoting environmental conservation near the Nyungwe National Park. Basically, the project blends modern beekeeping techniques with ecological stewardship offering cooperatives training, tools, and market access to sustainably produce and package pure honey. By ranging income generation with nature preservation, Eco Hive Guardians empowers communities not just as honey producers, but as protectors of their land turning traditional livelihoods into a force for biodiversity, reforestation, and antipoaching advocacy.

## Target beneficiaries or stakeholders

The primary beneficiaries of the Eco Hive Guardians project are the beekeeping communities living around Nyungwe National Park in Rwanda, cooperative members, skilled youth and women faces unemployment issue and local families who rely on natural resources for their livelihood. These individuals are not only self possessed to gain improved incomes through sustainable, high quality honey production and access to new markets but also to become active guardians of the environment. By supporting them with modern skills, tools, and ecological awareness, the project transforms them from passive recipients of aid into empowered guardians of biodiversity, whose everyday work helps protect one of Rwanda's most valuable ecosystems for future generations.

## Project location

Eco Hive Guardians is located near the rich biodiversity of Nyungwe National Park in Rwanda's Nyamasheke District.

## Timeline

N <sup>o</sup>	Activities	Time Frame/Month											
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>	8 <sup>th</sup>	9 <sup>th</sup>	10 <sup>th</sup>	11 <sup>th</sup>	12 <sup>th</sup>
1	Look for base place for rent and Equipment	■	■										
2	Identify and engage local beekeeping cooperatives.			■									
3	Meet with local food standards agencies for guidance and certified.				■								
4	Launch training on sustainable beekeeping, hygiene, and ecological practices.					■							
5	Introduce modern beekeeping tools and techniques						■						
6	Begin processing and awareness campaigns on antipoaching and reforestation							■					
7	Monitor progress of honey production and provide onsite mentorship								■				
8	Connect cooperatives with potential buyers (in country an outside)									■			
9	Facilitate market readiness assessments for local and export opportunities.										■		

10	Evaluate project impact on both livelihoods and conservation.													
11	Look for our own place													

- **From 1<sup>st</sup> month up to 4<sup>th</sup> month:** Project Foundation & Community Engagement
- **From 5<sup>th</sup> month up to 6<sup>th</sup> month:** Capacity Building & Skills Development
- **From 7<sup>th</sup> month up to 8<sup>th</sup> month:** Implementation & Product Development
- **From 9<sup>th</sup> month up to 10<sup>th</sup> month:** Market Linkages
- **From 11<sup>th</sup> month p to 12<sup>th</sup> month:** Impact Evaluation and new approach navigation

**Expected outcome**

The Eco Hive Guardians project is expected to bring about a deep transformation in the Nyamasheke District by blending community empowerment with environmental guardianship. As communities take ownership of protecting their environment reducing deforestation, wildlife conflict, and poaching the initiative will strengthen both livelihoods and ecosystems, turning rural residents into guardians of the Nyungwe National Park and creating a lasting model for environmentally friendly development.

### 3. Implementation Plan

**Activities to be Undertaken**

Eco Hive Guardians will initiate with an engagement of local beekeeping cooperatives through structured outreach and participatory meetings to identify needs and existing practices. This will be followed by training workshops in sustainable and modern beekeeping, honey hygiene protocols, and environmentally friendly production. Parallel activities will include developing localized educational materials, facilitating mentorship sessions, and launching awareness campaigns on reforestation, antipoaching, and habitat preservation. These activities will peak in coordinated efforts to connect the cooperatives with local and international buyers, ensuring both income growth and conservation goals.

**Strategy to be Used**

The project adopts a public centered, capacity building strategy through empowerment, education, and ecological preservation. It will leverage cooperative structures as platforms for skill transfer, ensuring that beneficiaries are not passive recipients but active drivers of change. Combining local knowledge with academic expertise and set with regulatory frameworks to ensure compliance with food safety and export standards.

**Roles and Responsibilities**

Local cooperative members will be at the heart of implementation serving as both trainees and community educators. Project facilitators will be responsible for organizing training, developing

learning materials, and collaborate with conservation partners. Academic and technical experts will provide guidance on modern beekeeping techniques and ecological impacts. Local authorities and regulatory bodies will offer oversight on quality standards, packaging, and export protocols. Market access teams will take charge of linking the cooperatives to both domestic and global buyers. Every stakeholder will play a clearly defined role, with collaboration and accountability emphasized at every phase.

### Technologies Involved

The project will incorporate a range of low cost and scalable technologies suited to rural contexts. This includes modern hive designs (Langstroth and Kenyan top bar hives), protective gear for safe harvesting, and stainless steel honey extractors for hygienic processing. digital platforms will be used for cooperative coordination, training modules, and global marketing outreach. Packaging technology that meets international standards will also be introduced to boost export readiness without compromising sustainability.

## 4. Three Months Action Plan

Activity	Starting Date	End date
Look for base place for rent and Equipment	27/06/2025	27/06/2025
Identify and engage local beekeeping cooperatives.	01/07/2025	29/07/2025
Meet with local food standards agencies for guidance and certified.	1/08/2025	31/08/2025

## 5. Annual Budget

Place of operations	
Place/ workshop/ per month	\$353.87 (12months) =4,246.44
Place renovation	\$711.88
<b>Sub Total</b>	<b>\$4,958.32</b>
Production materials	
100 units of Modern hives	\$7.12(100units) =\$712

branded, ecofriendly packaging material (2000units)	$\$0.36(1000\text{units}) = \$360$ (12months) =4320
Protective gear (10 units)	$\$40(10 \text{ units}) = \$400$
Honey compressor machine (2 units)	$\$ 786.23$ (2 units) = \$1,572.46
Honey filters (3 units)	$\$ 21.36$ (3 units) = \$64.08
Containers (1 units)	$\$ 284.75$
Pipes (12 minters)	$\$3.56$ (12 meters) = \$42.72
Weigh Balance	$\$28.48$
Furniture	$\$424.64$
<b>Sub Total</b>	<b>\$7,849.13</b>
<b>Certification</b>	
Certification for application and registration for FDA (\$375) visit and RSB S mark (\$141.54)	$\$516.54$
<b>Sub Total</b>	<b>\$516.54</b>
<b>Staffing and Coordination</b>	
Manual workers (6 person)	$\$85.43$ (6 person) = \$512.58
Contractors (2 person)	$\$142.38(2 \text{ person}) = \$284.76$
<b>Sub Total</b>	<b>\$797.34 (12 months) =\$9,568.08</b>
<b>Environmental Conservation Activities</b>	
Tree seedlings for reforestation (200) seedlings	$\$3.56(200) = \$712(12 \text{ months}) =\$8,544$
Awareness campaigns	$\$ 141.5471(12 \text{ months}) =1,698.5652$

<b>Sub Total</b>	<b>10,242.5652</b>
<b>Miscellaneous and Contingency</b>	
Transportation and logistic	\$176.9339(12 months) = \$2,123.2068
Electricity	\$7.077 (12month) =\$84.924
Monitoring and evaluation	\$176.9339 (4 times a year) =707.7356
<b>Sub Total</b>	<b>\$2,915.8664</b>
<b>Pre-Contingency</b>	<b>\$36,050.5016</b>
Contingency (10%)	\$3,605.05
<b>ESTIMATED TOTAL BUDGET</b>	<b>\$39,655.55</b>

## 6. Monitoring and Evaluation

### How Progress Will Be Tracked

Progress for the Eco Hive Guardians project will be tracked through a dynamic, participatory system that involves regular feedback loops with cooperative members, field visits, and progress check ins. Each project milestone such as training sessions completed, receipt attachment, beekeeping tools distributed, or market access steps initiated will be logged through monthly reports and digital records. Local project collaboration will serve as community monitors, capturing real time insights, challenges, and success stories. This inclusive tracking approach ensures not only transparency but also raise a sense of community ownership and continual adaptation as the project evolves.

### Key Performance Indicators

The project's success will be measured through clear key performance indicators, including the number of cooperatives trained in modern beekeeping methods, the volume and quality of honey produced, and the number of new market linkages created both locally and internationally. Additional KPIs will include the reduction in environmentally harmful practices (like bush burning or poaching), the number of communities led conservation initiatives launched, and changes in cooperative income levels. These indicators will help to measure both environmental and economic progress in a tangible, relatable way for the stakeholders.

### Evaluation Methods

Evaluation will combine both quantitative and qualitative approaches, ensuring a full picture of impact. Baseline and endline surveys will assess knowledge gained and changes in practices, while focus group discussions and interviews will provide narrative information into community experiences and perceptions. Independent evaluators will work closely with cooperative leaders and environmental partners to assess ecological benefits and behavioral changes. These methods will also highlight unintended impacts, helping the project learn and grow.

### **Reporting**

Reporting will be conducted in a clear and engaging manner that resonates with both stakeholders and institutional partners. Monthly progress briefs, quarterly reports, and an annual impact summary will be shared with cooperatives, donors, and local authorities. These reports will feature storytelling elements like testimonials, photos, and case studies alongside data to make the information accessible and inspiring. A community feedback session will also be hosted annually to share findings, celebrate successes, and plan improvements for the following year.

## **7. Sustainability Plan**

### **How the project will be sustained after initial implementation**

Eco Hive Guardians is designed with long term impact at its key. After the initial phase of training and resource provision, the project will embed sustainability by empowering local cooperatives with self sufficient business models. By providing beekeepers with tools for high quality production, market access strategies, and ongoing mentorship, the project ensures that 60% income from honey sales will directly fund community led conservation activities and 40% left for initiative stabilization. Strong partnerships with regulatory authorities, exporters, and the buyers will further reinforce the value chain, allowing cooperatives to grow independently. The inclusion of modern, ecofriendly practices will reduce dependency on external support while strengthening the resilience of both the communities and the ecosystems they protect.

### **Community involvement**

From the ground up, Eco Hive Guardians will be community driven. The heart of the project lies in inclusive participation local beekeeping cooperatives will be engaged in designing, implementing, and monitoring activities. Through workshops, peer to peer learning, and shared leadership roles, community members will not just receive knowledge but become stewards of environmental protection. By integrating conservation with livelihood development, the project will make a sense of ownership and pride in preserving Nyungwe National Park. Eventually, it's the people who live closest to the forest who will become its most passionate guardians, advocating sustainability for generations to come.