

Cavally

Phase 1 Report

Cavally: a resilient territory and communities
for better forest protection.



From June 2020
to June 2023

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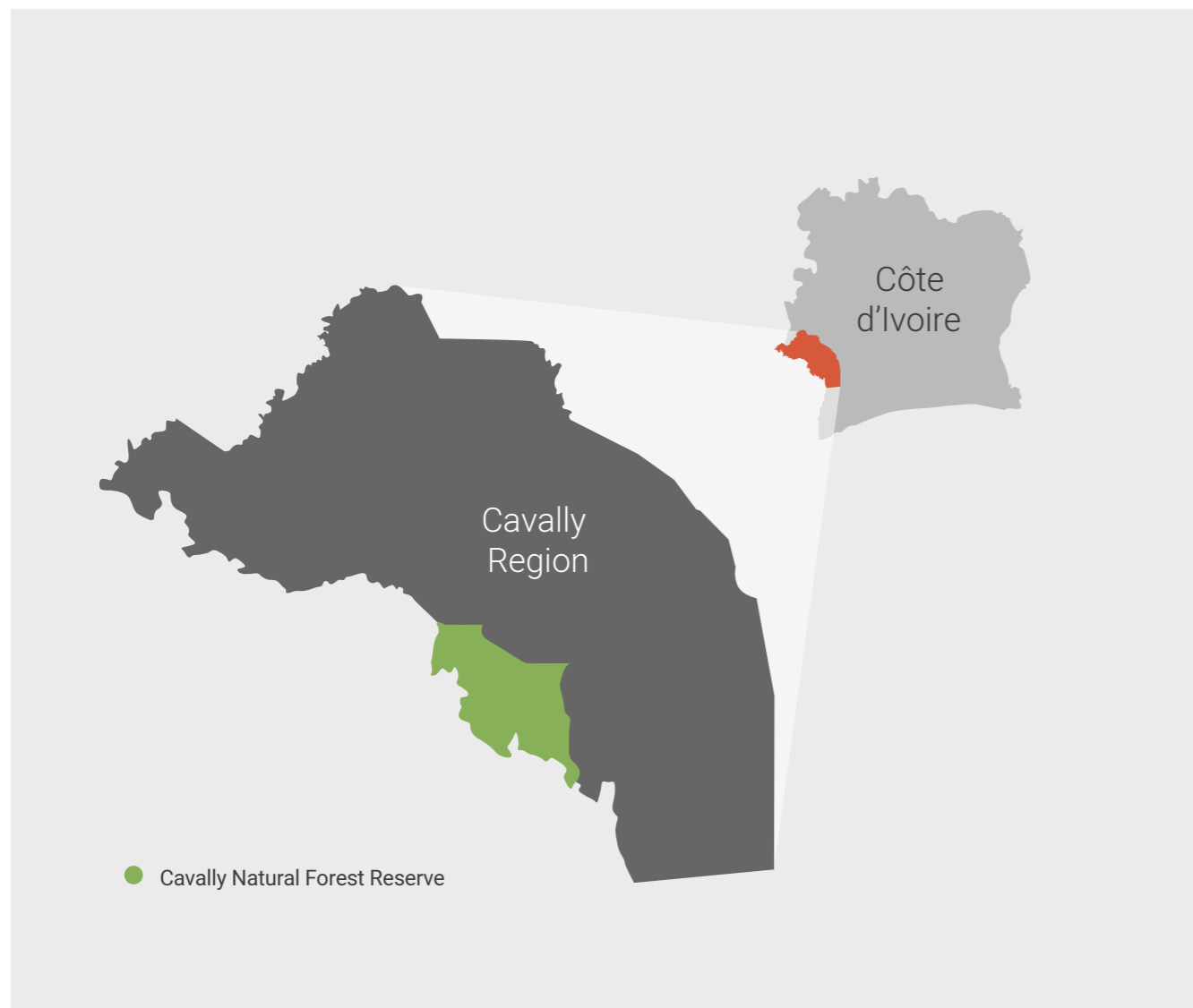
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Background and origins of the project



Côte d'Ivoire

Côte d'Ivoire has experienced a substantial decline in its forest cover over the past 60 years. Between 1960 and 2021, the forest area decreased from 16 million to 2.97 million hectares. Small-scale farmers, primarily engaged in cocoa production, have been a significant contributor to this loss.

Located in Zagné, between the Taï National Park in Côte d'Ivoire and the Grebo Krahn National Park in Liberia, the Cavally Classified Forest (elevated to Natural Forest Reserve status by presidential decree on September 13, 2023) is part of the Upper Guinea biodiversity hotspot spanning Côte d'Ivoire, Liberia, Guinea, and Sierra Leone. Encompassing 67,541.34 hectares, this forest reserve is a biodiversity hotspot, housing endangered animal species such as chimpanzees, elephants, and pygmy hippos. Over the years, many small-scale farmers have cultivated crops within the reserve, constituting illegal activity under the 2019 Ivorian Forestry Code. This agricultural expansion has resulted in significant degradation of the vegetation cover, with 6,043 hectares of natural forest lost within the reserve, primarily between 2010 and 2011 during the Ivorian crisis.

Satellite monitoring (using the Starling tool) conducted since 2017 by Earthworm Foundation (EF), Airbus, and the Société de Développement des Forêts (SODEFOR) has revealed the substantial pressure faced by the reserve. The baseline map generated in January 2018 indicated that 22,493 hectares were

heavily degraded, accounting for 33% of its total area, and 4,997 hectares featured cocoa undergrowth, representing more than 7% of its overall area. By the fourth quarter of 2020, only 35,074 hectares of the reserve remained identified as forest.

Consequently, the Cavally project was initiated in 2020 through a partnership between the Ivorian government (represented by MINEF), Nestlé, SODEFOR, and Earthworm Foundation to aid in the conservation and rehabilitation of the Cavally reserve. The initial phase of the project, spanning from June 2020 to June 2023, was fully financed by Nestlé and executed by Earthworm Foundation in close collaboration with SODEFOR and local communities.





3-Year Summary: Protecting and Rehabilitating the Cavally Forest

After three years of implementation, the Cavally project has had a significant impact on the protection and rehabilitation of the Cavally forest. The measured results include:

7,000 ha

of natural regeneration estimated thanks to the significant reduction in intrusion into the Cavally Forest.

89%

of the communities surveyed at the end of Phase 1 are aware of the importance of protecting the Cavally Forest and its usefulness for the ecosystem.

1500 ha

of reforestation.

This was made possible thanks to the involvement and participation of local communities and stakeholders through various activities, including **15 mixed patrols** carried out in the forest (SODEFOR agents, EF agents, and people from local communities) and the establishment of **13 nurseries** run by communities to produce seedlings of local species.

The Starling satellite tool made it possible to monitor deforestation alerts in the Cavally reserve in real-time and thus direct the work of patrols and reforestation activities. It has also enabled more accurate data collection on land use compared with the reference map obtained in 2018, particularly on areas of degradation and natural regeneration.



3-Year Summary: Improving the Resilience of Local Communities

Through the Cavally project, we worked closely with local communities in outlying areas to improve their resilience and create the right conditions for them to take ownership of forest conservation. Nearly **1,400 people** have benefited directly from the project through activities that have helped them to increase productivity, diversify their sources of income, and gain easier access to finance (small loans):

460

people engaged in income diversification activities (food crops, nurseries, livestock, etc.).

10

Village Savings and Loan Associations (VSLA's) were set up with **349 members**, mostly women.

257

cocoa plantations were diagnosed with the aim of supporting the farmers in maximizing the productivity of their cocoa plantations.

160

farmers have been helped to implement good agricultural and environmental practices.

187 ha

of plantations are under agroforestry

In partnership with the International Cocoa Initiative (ICI), we helped the farmers improve the protection of children's rights. This was done through mass awareness campaigns in 10 communities, with the registration and distribution of 250 birth certificates to children.

02

Phase 1.

Partners and governance



Partners and Governance

Financial partner



Steering Committee



Technical Committee



Société de Transformation du Bois du Cavally (STBC) Cavally Regional Council

Monitoring and evaluation



Implementation partners



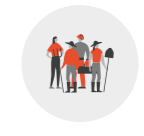
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Objectives: Resilient Communities for Better Forest Conservation



Forest

- Preserve residual forests.
- Rehabilitate degraded areas of the Cavally reserve in collaboration with local communities.



Communities

- Supporting the transition of farmers depending on the reserve.
- Work closely with the local population in the peripheral areas to improve their resilience and encourage regenerative agriculture.
- Raise awareness of child labor and improve children's access to education.

04

Project milestones



JULY 2020

- MoU and governance structure
- Awareness-raising sessions with communities



- Holistic diagnosis in 46 villages and camps
- Development of an action plan with communities



- Implementation of activities on the ground in collaboration with local communities and partners
- Satellite monitoring



- Patrols in the reserve
- Nursery production and reforestation activities
- Maximizing production
- Agroforestry
- Raising awareness about child labor and registering children to obtain birth certificates



JUNE 2023

- End of phase 1
- MoU Signing, Phase 2

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Holistic diagnosis



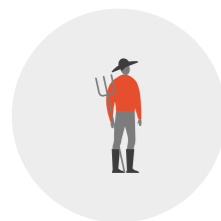
As a starting point, a holistic and participatory diagnosis of the social and environmental dynamics was carried out to facilitate the implementation of sustainable solutions for maximum positive impact. The choice of communities was based on the following criteria:

- Proximity to the Cavally Forest Reserve.
- Limited access to basic services.
- The presence of a higher proportion of producers growing crops in the forest.
- Communities within the periphery that are capable of playing a role in the solution development phase.

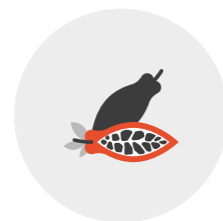


Results of the holistic diagnosis

01 Farmers Profile



94% of farmers are men



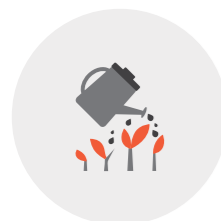
The average size of cocoa plots is 4.6 hectares



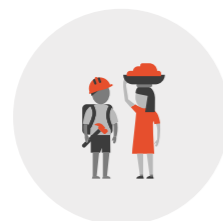
36% of farmers grow rubber trees as well as cocoa.



Farmers own the land they farm, but 63% have no proof of ownership.



96% of cocoa farmers use plant protection products.



61% of farmers' children go to school, and 38% of children work on farms.

02 Land use in the landscape

2,246

smallholders in the peripheral zone

7,370 ha

of large-scale rubber plantations

10,333 ha

under cultivation

4,735

small-scale rubber farmers

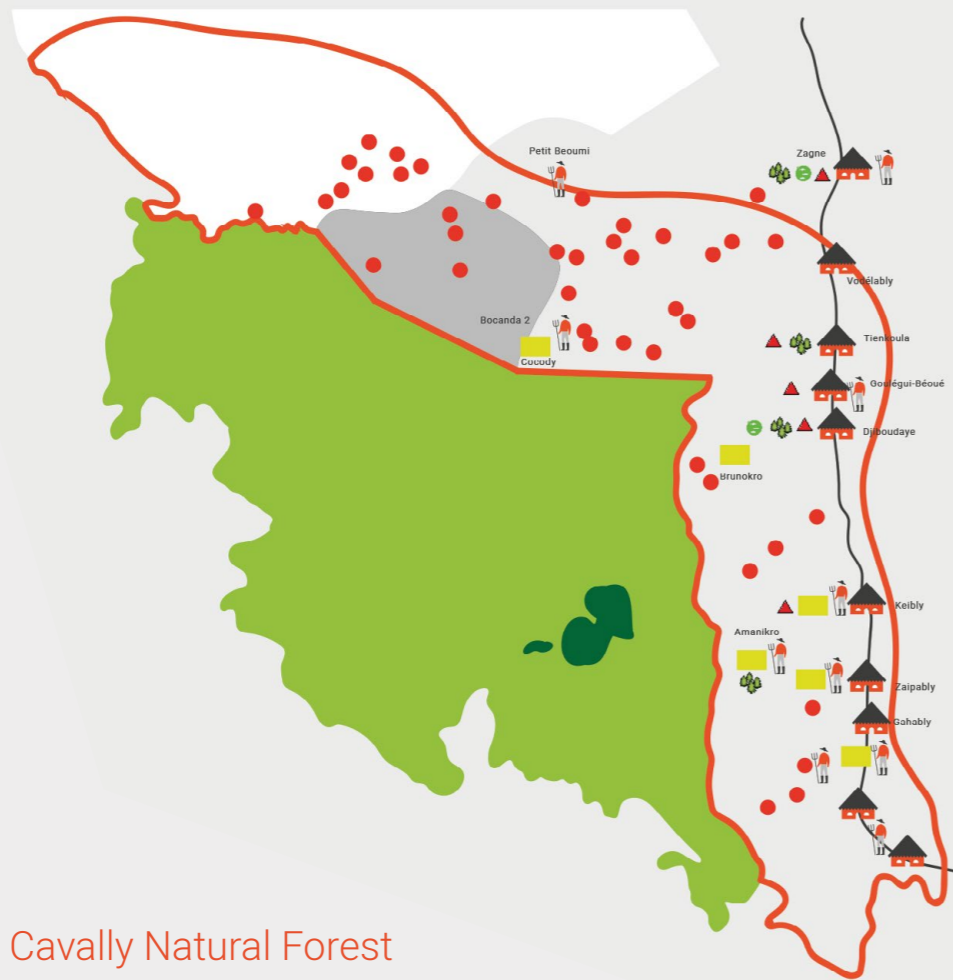
03 Forest



- High CO2 emissions due to degradation and changes in land use
- Between 2012 and 2019, the carbon stock of the Cavally forest decreased by 0.6 million metric tons (Mullion Group study, 2019)



Overview of phase 1 project activities



The Cavally Natural Forest Reserve conservation project

- Supported groups and farmers
- Plantations diagnosed
- Villages
- Camps
- Untarred roads
- Replanted and maintained plots in 2021
- CHC industrial plantations
- Cavally classified forest
- 10km buffer zone
- Village savings and loan association
- Agroforestry
- Nurseries for reforestation

Figure 1: Maps of phase 1 activities

06

Results achieved



01 Forest



The deforestation rate is **down sharply from 3.78% in 2018 to 0.05% in the second quarter of 2023.**

Figure: Change in degradation alerts from 2018 to 2022

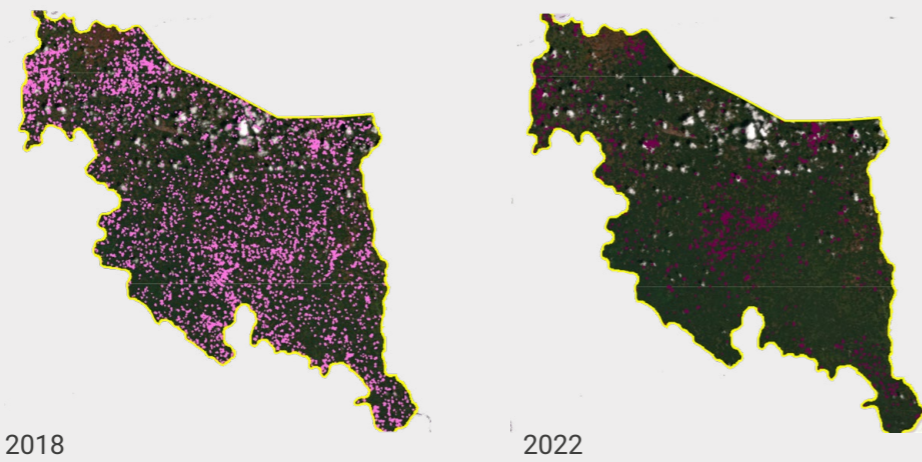
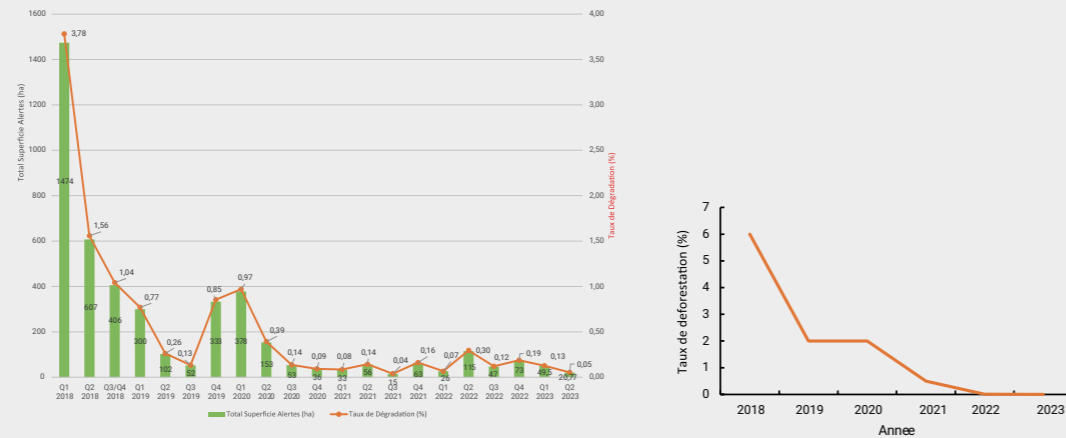


Figure: Deforestation rate from 2018 to 2023



Nearly **7,000 ha** of natural regeneration

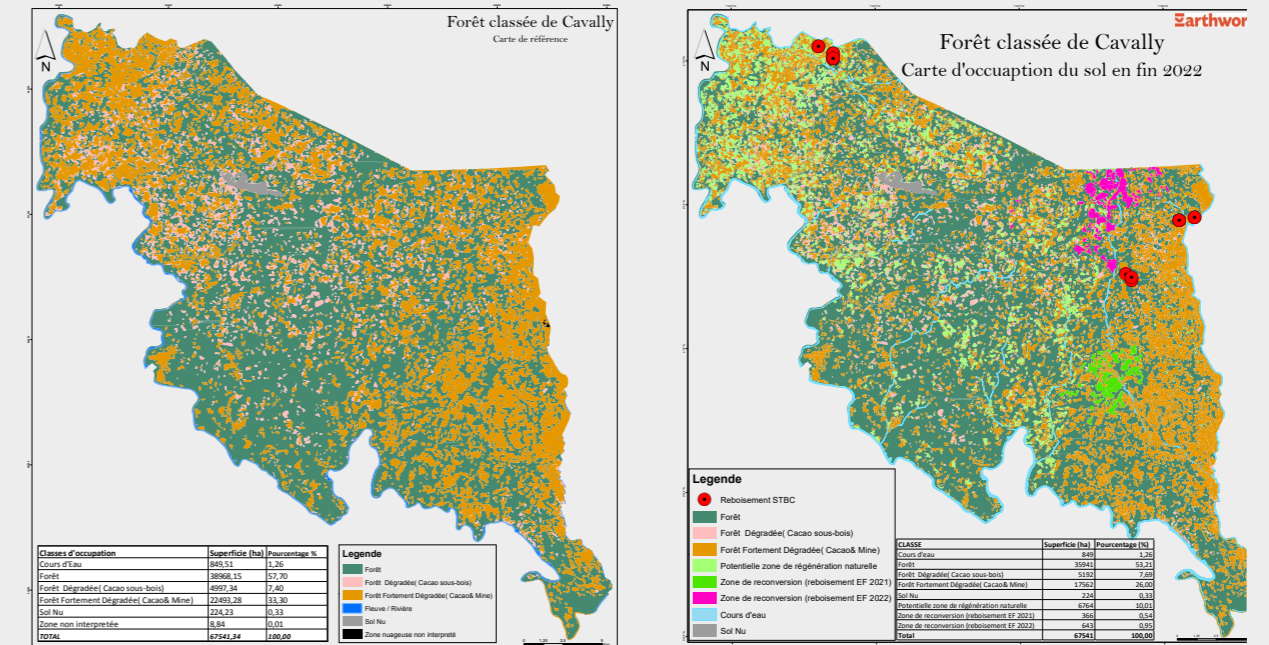


Figure: Land use map between 2018 and 2022

Appropriation of forest protection and regeneration by local communities



Nursery production

- 12 nursery production groups.
- 363 people involved, 88% of them women and 12% men.
- 8 localities are involved in the peripheral zone.



Reforestation activities

- 1,500 ha reforested.
- 16 local species were used.
- 475 people from local communities were involved.



Forest protection and regeneration

- 15 patrols carried out.
- 241 local people were involved.
- 4,687 ha patrolled.
- 7,000 ha of natural regeneration were observed.

02 Communities



Income diversification

- **460 people** involved in income diversification activities (tree nurseries, food crops, snail farms, etc.).



Agroforestry

- **117 plantations** under agroforestry, representing 187 ha
- **8 local species**
- **10 demo plots** with ICRAF



Maximizing cocoa production

- **160 farmers** were supported.
- **257 cocoa plantations** were diagnosed (538 ha).



Improved access to credit and women's empowerment

VSLAs (Village Savings and Loans Associations) help combat poverty and empower women in rural areas. VSLA is made up of 25 to 30 members of the same community who meet regularly in a safe space to save their money and create a fund to help members:

- access loans to invest in their projects or businesses or pay for major expenses such as agricultural inputs;
- Access emergency aid in the event of unexpected problems.

At the end of each cycle (usually about a year), the entire fund, together with the interest earned, is distributed to members according to the amounts saved in the group. Those who saved money end up receiving more than they initially contributed as interest.

- **10 VSLAs** in 8 communities.
- **350 people** were involved (mainly women).
- **21 projects** have been achieved.
- **15,050,250 FCFA (22,950 Euros)** mobilized.
- **2,315,000 FCFA (3,530 euros)** in loans.

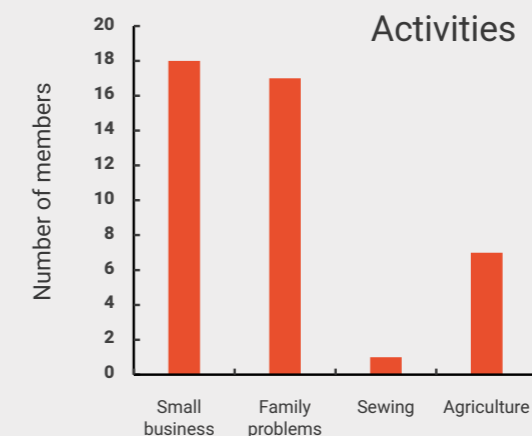


Figure: Breakdown of loan use by sector of activity



Raising awareness of child labor and improving access to education

823

people reached with awareness sessions: 363 children, 196 women, and 264 men.

10

10 communities.

250

children are registered to obtain a birth certificate to enable them to access higher education.

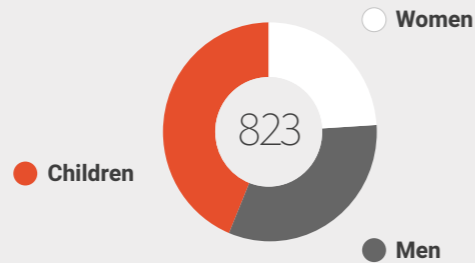


Figure: Proportion (%) of men, women, and children reached during awareness campaigns

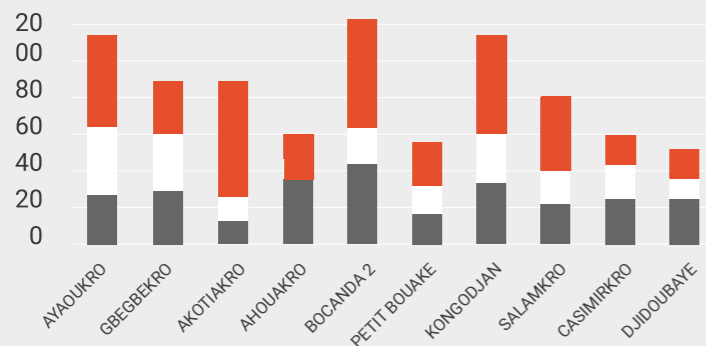


Figure: Number of awareness campaigns (men, women, and children) per community

End of phase 1 external evaluation report

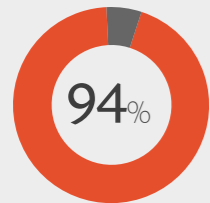
The Swiss Center for Scientific Research (Centre Suisse de Recherche Scientifique - CSRS) in Côte d'Ivoire carried out an evaluation at the end of the project to measure the impacts achieved and the lessons to be learned from the first phase for a better implementation of the second phase. The CSRS is a very active institute in the fields of biology, food

safety, the environment, and health. Its mission is to initiate, encourage, support, and conduct research with partners for sustainable development in Côte d'Ivoire and West Africa. The evaluation surveys targeted 11 communities located in the peripheral zone of the Cavally reserve, with a total of 374 people interviewed, including 127 women and 247 men.

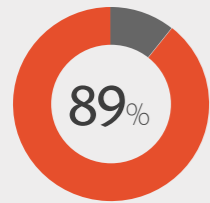


Some key findings

Local communities are more aware of the importance of protecting Cavally Forest and its benefits for the ecosystem.



The vast majority of the local population surveyed (94%) is **aware that it is forbidden to cultivate farmlands in the reserve.**



Following the various awareness campaigns carried out during the project, there has been a marked improvement in the local perception of the importance of the Cavally Forest. From 30% of people interviewed in 2021 to 89% in 2023, they **recognize the negative impacts of deforestation** and the importance of protecting the forest.



According to the majority of respondents, the forest plays an essential role in regulating rainfall, thereby creating a climate in which their crops can thrive, protecting their crops and homes from strong winds, providing fresh air and oxygen, and providing a source of medicines and food resources.

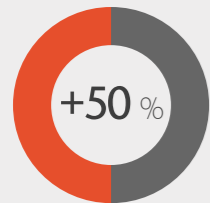
“At Zaipobly, we understood the importance of the Cavally forest and with our entire community, we will continue to protect it. »

Mr. TAI Bloade Donatien, Chief of Zaipobly Village.



Some key findings

The VSLAs enhance the resilience of communities



VSLAs appear to be an effective tool to enhance the resilience of communities in the periphery zone. **More than 50% of the members of VSLAs say that their income has increased.**

More than 75% of VSLA members understood that this structure could contribute to reducing intrusions into the Cavally Reserve.

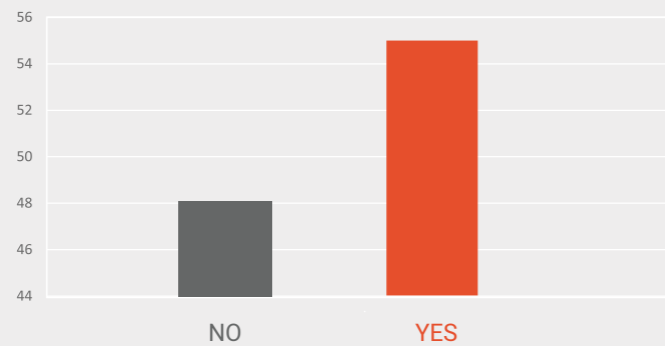
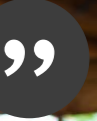


Figure: Number of members whose income has increased thanks to the VSLAs.



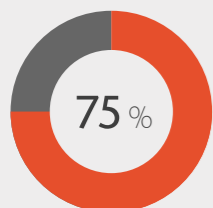
“Thanks to the money I borrowed from the VSLA; I have opened a business, and now I can look after my family.”

Mrs. Glah Félicité, trader



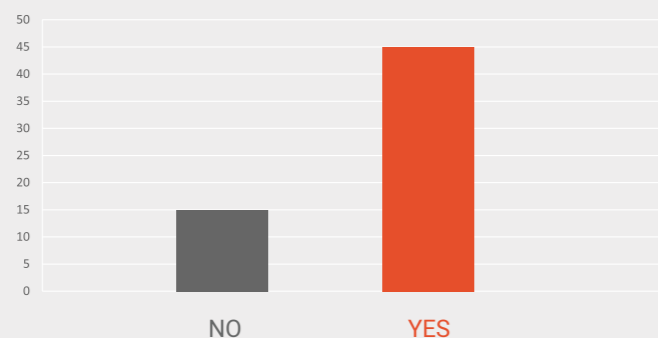
Some key findings

Maximization activities (good agricultural practices) and seedling production (nurseries) also contribute to greater economic resilience in communities.



75% of those surveyed who had taken part in reforestation and nursery activities noted an improvement in their financial situation. Thanks to the sale of seedlings from their nurseries, they are now able to provide for their families more easily, send their children to school without too many constraints, and save more.

Despite their small numbers, the farmers monitored under the cocoa production maximization program have reported a clear increase in their cocoa production compared with 2021. Several of them provided figures to back up their claims, indicating significant increases in their yields. Some reported gains that doubled their production compared with the previous year.



Has this program enabled you to increase your cocoa production compared to last year?

Figure: Number of farmers taking part in cocoa maximization activities and seeing an improvement in their income



“With the farming techniques taught to me by Earthworm agents, I no longer need to destroy the forest to earn more money.”

— Mr. Gbangbo Nicaise, cocoa farmer

“Today, Earthworm brings us real-time alerts captured by satellites, which allow us to check and curb illegal entries into the Cavally forest.”

Lt. Coulibaly, CUGF Zagné



The first phase of the Cavally project has laid solid foundations for preserving and restoring this precious forest. The Earthworm team has developed a strong presence and a relationship of trust with the local communities and partners, a fundamental element in guaranteeing the sustainability of the actions undertaken. Some community members have been directly involved in the various activities linked to the monitoring and restoration of the reserve, and a number of farmers and their families have been able to improve their economic resilience thanks to the various activities enabling them to improve the productivity of their cocoa plantations or diversify their sources of income. The collaboration and support of the Ministry of Water and Forests (MINEF) and SODEFOR also played an important role in the success of this project.

This first phase also identified the need to involve all the economic players in the area, including the rubber sector, if the impacts achieved to date are to be further improved. It is also necessary to combine the landscape approach with the work being done in the private sector supply chains, involving as many commercial players as possible in the area. In this way, all the elements will be brought together to continue to co-construct an approach that can have a positive impact on the forest and the people living in this ecosystem.

Encouraged by the positive impact of the partnership during this first phase, Nestlé has decided to renew its commitment for another three years and has been joined by new partners from the public and private sectors. This second phase, which will last for three years, has its ambitions revised upwards to have an even greater impact on the preservation and restoration of the forest and on the cocoa and rubber-producing communities in the peripheral zone of the Cavally reserve.



“The efforts made during the first phase of the project have produced encouraging results, including a significant reduction in deforestation and the restoration of thousands of hectares of forest through natural regeneration and reforestation activities involving local communities. We are pleased to have been able to contribute to the success of this first phase and look forward to welcoming new partners to further intensify the impact in the second phase.”

Darrell High,
Nestlé Cocoa Plan Manager

07

Cavally phase 2 Vision and Ambitions



Phase 2: June 2023 to June 2026

Still working alongside Nestlé, new partners, including the Swiss Confederation/SECO, Touton, Cocosource and Barry Callebaut have joined the collective effort to continue the project for another 3-year phase. Forest conservation and community resilience remain the pillars of the project. Added to this is the establishment of more transparent and traceable cocoa and rubber supply chains.

DEVELOPMENT OF PHASE 1

NEW OBJECTIVE FOR PHASE 2



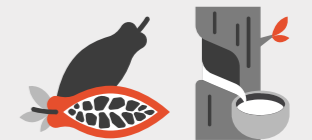
Communities

Promote the social and economic resilience of farmers and local communities.



Forest

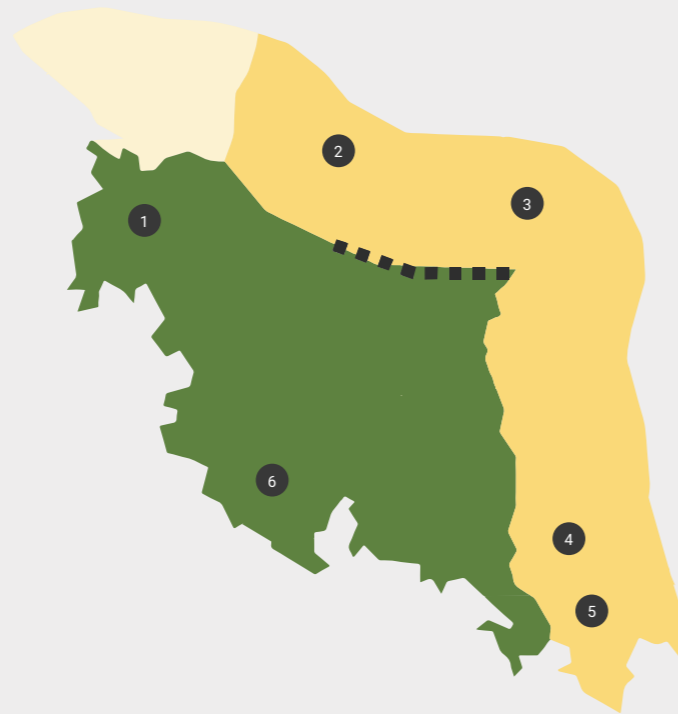
Preventing deforestation and regenerating ecosystems.



Agricultural supply chains

Establish a transparent and traceable supply chain for cocoa and rubber.

Phase 2: Objectives



1 Conserved forests

- 38,775 ha conserved
- No more deforestation
- 11 km of forest boundary restored



4 Social resilience

- 110,000 children benefited from improved access to school or basic infrastructure.



2 Economic resilience

- 750 cocoa farmers with improved crop profitability
- 1,160 benefit from the income diversification programs.
- 1,200 farmers benefit from improved access to finance



5 Transparent and traceable supply chain

- HCV/HCS-protected forest area
- 5,000 farmers who do not deforest receive a fair price.



3 Environmental and agronomic Resilience

- 1,200 farmers (3,600 ha) use CSA principles
- 420 farmers (1,070 ha) use agroforestry systems.



6 Severely degraded forests

- 3,000 ha of reforestation
- 3,357 ha of natural regeneration
- Destruction of 17,450 ha of illegal plantations

Acknowledgments

We would like to extend our gratitude to all the stakeholders who participated in phase 1 of the project and contributed to its success, as well as for helping us identify a range of learnings that will enable us to solidify the approach of the second phase.

Our thanks go to Nestlé, which was the sole donor, as well as the Ivorian Ministry of Water and Forests, which represents the Ivorian government. Our thanks also go to our implementation partners, such as SODEFOR, ICI, and ICRAF. Finally, we would like to thank the entire population of the Cavally region, especially the communities that have agreed to work closely with us to conserve one of the last remaining forests in Côte d'Ivoire.

A big thanks to all the EF staff, those present, and those who have left for other ventures; your contribution to achieving these results can't be understated. Finally, thank you to the Swiss Confederation/SECO, Touton, Cocosource and Barry Callebaut for joining the partnership and enabling the launch of phase 2 with even greater ambitions.

The Cavally Project team



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