

TERMINAL EVALUATION OF THE EAST AND SOUTHERN AFRICA FOREST OBSERVATORY (OFESA) PROJECT

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Acronyms

CBFM	Community based forest management
CFM	Collaborative Forest Management
RCMRD	Regional Centre for Mapping of Resources for Development
EFD	Ethiopian Forestry Development
OFESA	The East and Southern Africa Forest Observatory
BIOPAMA	Biodiversity and Protected Areas Management
MJUMITAA	The Community Forest Conservation Network of Tanzania
DINAF	National Directorate of Forests
DNFT	National Directorate of Forests and Wildlife
KFS	Kenya Forest Service
TFS	Tanzania Forest Services Agency
REDD+	Reducing Emissions from Deforestation and Forest Degradation
NFA	National Forestry Authority
UWA	Uganda Wildlife Authority

Executive summary

The Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF) and the Regional Center for Mapping of Resources for Development (RCMRD) collaborated to implement the Observatory of Forests for Eastern and Southern Africa (OFESA). The project received funding from the European Commission of EUR 2,000,000 to operate for 36 months, commencing in August 2020 and concluding in August 2023. It builds upon the 2016 OFESA prototype, which entailed a series of assessments to explore the factors influencing the long-term operation and sustainability of a regional forest observatory.

OFESA's purpose was to establish a sustainable governance framework for the long-term functioning of the Observatory and to enhance human capacities in the areas of management and utilization of environmental information. The program was executed in five countries—Kenya, Uganda, Tanzania, Ethiopia, and Mozambique—with RCMRD serving as the implementing partner and host institution for the observatory.

In July 2023, an evaluation of the project's performance was carried out to appraise its overall effectiveness, particularly regarding its outputs and outcomes. The review was designed to assess the sustainability of the project's approach and activities, identify crucial lessons, and propose recommendations for future application.

The intended recipients of the evaluation were the key stakeholders of the OFESA project, including donors, implementing partners, and beneficiaries, and the figures included were accurate as of the time of the assessment. The evaluation design adopted a mixed-methods approach, integrating quantitative and qualitative data collection and analysis.

A total of 217 respondents, comprising 55 forest agency officials trained in GIS/remote sensingrelated skills, 140 scouts and community members trained in low-cost monitoring, and 22 project partners and relevant government officials, were surveyed through direct interviews, focus group discussions, and key informant interviews. Project document reviews were also conducted to gather data. A major limitation of this evaluation was limited access to some project beneficiaries, as well as potential biases in self-reported data.

Relevance: To what extent the project activities responded to the priorities and needs of the target groups and stakeholders

The evaluation aimed to assess the extent to which project activities addressed the concerns and requirements of target groups and stakeholders, particularly regarding insufficient and unreliable regional information on forest cover trends and weak mechanisms for data exchange and harmonization.

It concluded that the project to some extent responded to these concerns and requirements by enhancing the capacity of 14 forest institutions across Kenya, Uganda, Tanzania, Ethiopia, and Mozambique, where 207 national-level forest officials (150 men and 57 women) strengthened their capacity to collect, aggregate, and analyze forest data. In the evaluation sample, 71% of those surveyed indicated that the training was highly relevant, and 73% reported applying the acquired knowledge within their respective organizations.

Further, and despite ongoing challenges in enhancing data sharing, the project made progress by actively engaging officials from forest agencies in discussions on data sharing and governance. It also played a crucial role in encouraging partner countries to contribute and share their forest data on the OFESA geoportal: by the time of evaluation, over 20 layers of data from target countries had been shared there.

Coherence: The extent to which other interventions support or undermine the program, and vice versa

The program's coherence evaluation demonstrates a praiseworthy effort in establishing partnerships and collaborations during implementation. The formation of noteworthy alliances with the Joint Research Centre (JRC) and BIOPAMA significantly contributed to this success. These partnerships concentrated on capacity building, technical interoperability, regional status reporting, and capacity needs analysis; leveraging BIOPAMA networks also facilitated the identification of key forest agencies and promoted cooperation. Meanwhile, the existing partnership with RCMRD streamlined the process and encouraged data sharing among stakeholders.

However, while considerable progress has been made in this arena, opportunities for enhancement remain. The project could strengthen its approach by engaging with similar initiatives in the region and involving regional economic communities to foster a more inclusive and collaborative environment. Ensuring that regional initiatives and economic communities actively participate in collective efforts toward effective information sharing and environmental governance is essential. By doing so, the project can create a more comprehensive and coordinated approach to achieving its objectives.

Effectiveness: The extent to which project specific outcomes/objectives have been achieved.

In the context of its objective to develop a sustainable governance framework, OFESA achieved notable progress in attaining the project-specific results and targets. Key achievements at the output level include stakeholder mapping, identification of key forest actors in the target countries, governance workshops, and establishment of the OFESA portal.

However, certain targets and activities to serve the development of a sustainable governance framework faced delays and complexities. As of the evaluation, a formal governance framework for data sharing had not yet been established or endorsed by national forestry agencies in the target countries. Additionally, the finalization of the state of the forest report was delayed. These challenges were attributed to the intricate process of negotiation, engagement, and agreement with stakeholders, considering the deliberative nature of government decision-making.

Regarding OFESA's objective of building human capacities in environmental information management, regional and country-specific training sessions addressed capacity gaps, training a total of 624 national-level forest officials, communities, scouts, and rangers (483 men and 141 women) in the target forest areas, across Kenya, Uganda, Tanzania, Ethiopia and Mozambique.

Insights into the evaluation data gauged trainees' perspectives, revealing that 71% found the training highly relevant, with 73% subsequently applying the acquired knowledge within their respective organizations. Testimonials highlighted practical

knowledge gains, enhancing report writing, publication, and critical evaluation skills.

Challenges identified during training encompassed the need for extended sessions, a call for competence assessments to tailor content, and instances where acquired knowledge couldn't be applied due to lacking equipment and software in trainees' organizations.

Sustainability: The potential sustainability of the project's results

The evaluation assessed the long-term viability of the OFESA project's outcomes, specifically focusing on the observatory's data-sharing initiative. While the observatory's efforts are commendable, its continued success depends on crucial factors that necessitate a strategic approach.

Sustaining the observatory will depend on effective data submissions from participating countries and institutions. Achieving ongoing success will require addressing policy challenges, aligning with regional interests, and providing tangible benefits to stakeholders and the public.

Some benefits mentioned by partners include capacity building in data processing and the opportunity to provide training to other partners. Joint development of knowledge products, such as the State of the Forests reports, was another benefit. For instance, the forestry agencies in the pilot sites integrated low-cost monitoring as part of day-to-day activities for their forest officials/rangers.

To ensure sustained success, key considerations will include developing additional tailored incentives to motivate active data contributions, continuous capacity building to overcome technical obstacles, assisting institutions in acquiring modern tools, addressing financial constraints, and promoting collaboration and communication channels among participating entities.

Recommendations

 Undertake efforts to explore additional avenues for collaboration with regional initiatives and communities. Since most of these entities are working on similar initiatives in their national forestry/environment ministries, OFESA can utilize contacts there to facilitate collaboration on similar initiatives, rather than solely engaging with regional initiatives directly. Furthermore, the project can enhance its stakeholder engagement strategy to encompass a diverse range of organizations crucial to achieving project objectives, beyond the purview of national forest agencies.

- Position the project as a facilitator primarily focused on advancing data sharing to all stakeholders and beneficiaries. Strategically communicate the central focus of elevating data-sharing practices, moving beyond exclusive associations with capacity building. This alignment enhances perceptions, closely resonating with the overarching objective.
- Enhance communication strategies for the OFESA portal and its products to ensure widespread awareness among stakeholders and beneficiaries about its existence and value. Tackle obstacles impeding the overall efficacy of low-cost monitoring initiatives, encompassing the deficiency of essential devices like tablets, computers, and power banks for smooth data collection and analysis. Address issues related to the utilization of collected data by

communities and organizations, ensuring that the data is effectively leveraged. Additionally, explore strategies to scale low-cost monitoring to wider areas within the countries, thereby enhancing the utilization of forest data on a comprehensive, country-wide scale.

- Consider extended training sessions, conduct competency assessments, and recognize the rapid pace of technological advancements. Support participating institutions in enhancing technical expertise while acquiring modern tools and software to ensure effective utilization of knowledge.
- Ensure the governance framework and portal demonstrate tangible benefits to stakeholders and the public for the observatory's sustained success. Craft additional incentives aligned with stakeholder needs and actively address financial constraints, technical expertise scarcity, and evolving technologies to support long-term viability.

Introduction

The Eastern Africa region faces numerous challenges in strengthening its monitoring systems, including limited technical capacity, insufficient data analysis, and a prevailing reluctance towards data sharing. The effectiveness of current forest monitoring systems is hindered by the scarcity of data and the lack of reliable, up-to-date information regarding trends in forest cover. This deficiency impedes the establishment of baselines necessary for monitoring and reporting on REDD+ and other climate-related targets and obligations. The availability and reliability of data and information are fundamental pillars for enhanced landscape management and the subsequent political decisions associated with them.

In 2016, following a series of assessments to investigate the factors affecting the longterm operation and sustainability of a forest observatory, a prototype for such an observatory in East Africa—with Kenya, Uganda, Tanzania, and Mozambique as pilot countries—was proposed. The proposal included recommendations for the sustainable implementation of the forest observatory, suggestions for a hosting institution, the need to design a database and web platform, identification of governance conditions for longterm implementation, and the development of regional forest and REDD+ status reports.

Based on the OFESA prototype, in 2019, the Center for International Forestry Research (CIFOR) which has since merged with World Agroforestry (ICRAF) and is now known as CIFOR-ICRAF—was entrusted with a EUR 2,000,000 funding allocation from the European Commission to implement the Observatory of Forests for Eastern and Southern Africa (OFESA) in collaboration with the Regional Center for Mapping of Resources for Development (RCMRD).

Spanning a period of 36 months, OFESA had two primary objectives: establishing a sustainable governance framework for the long-term operation of the observatory, and enhancing human capacity in the management and utilization of environmental information. The geographical focus of the project encompassed five countries—Kenya, Uganda, Tanzania, Ethiopia, and Mozambique—with RCMRD designated as the host institution for the observatory.

The project's ambit included the formulation of an all-encompassing State of the Forests report that tackled crucial topics agreed upon by the participating countries. Moreover, the project aspired to equip a minimum of 100 forest agencies, officials and communities near targeted forests with the aptitude to plan, collect and manage forest data within the forestry sector. The Kenya Forest Service, Tanzania Forest Service, and Uganda Wildlife Authority were among the institutions earmarked for capacity building.

The project also aimed to establish data-sharing arrangements within the region, increase access to the OFESA website to at least ten thousand visits annually, standardize and make accessible a minimum of twenty data layers in the data portals, and cooperate with comparable initiatives in the region.

Scope and purpose of the final evaluation

An internal final evaluation was initiated to evaluate the project's general performance, with a focus on its specific outputs, outcomes, sustainability, and lessons learned. The objectives of this evaluation were as follows:

- To conduct an overall appraisal of the project, particularly its outputs and outcomes
- To assess the sustainability of the project's strategy and activities
- To identify and document key lessons learned and best practices, and to propose practical recommendations for follow-up interventions or scaling up

Key evaluation questions

The key areas that the evaluation aims to answer are:

- Relevance: To what extent did the project activities respond to the priorities and needs of the target groups and stakeholders?
- **Coherence:** To what extent have other interventions supported or undermined the program, and vice versa?
- Effectiveness: To what extent were projectspecific outcomes or objectives achieved undertaken?
- **Sustainability:** What measures are/could be in place to ensure the continued success and impact of the project beyond its initial implementation?

Methodology

The evaluation employed a mixed-methods approach, including quantitative and qualitative data collection and analysis. A purposive approach—specifically maximum variation sampling¹—was used to select forest agency officials trained by Regional Center for Mapping (RCMRD), using a list of trainees from participating countries. The evaluation team also invited people on a list of community members, scouts and rangers who had been trained under the low-cost monitoring component of the project for location-specific focus group discussions (FGDs). Key officials from partners organizations and governments that have participated in the implementation of the project were also interviewed through key informant interviews. (Table 1 shows the number of men and women respondents from each country and affiliation group.)

We note that there were no interviews for the low-cost component in Mozambique and Ethiopia since by the time of the evaluation there were no activities of low-cost component that had been implemented. The evaluation also reviewed project reports to gather information on the project's implementation and operation, such as annual project progress reports, trip reports, partner reports, and newsletters. The collected evidence informed the development of the evaluation's conclusions and recommendations.

Data collection

The collection of data related to the low-cost component of the project was organized and conducted from July 15th to August 17th, 2023, at forest stations in Mau and Kilifi, Kenya; in communal forest areas in Nyamwage, Tawi, and Mtanzamsona, Tanzania; and in forest sectors in Budongo, Kagadi, Hill Reserve, and Kisindi, Uganda.

Data collection was also carried out with forest agency officials, and via key informant interviews (KIIs) with officials from partner organizations and government officials, during the same period. These interviews primarily took place in the capital cities of the project target countries and were conducted during the implementation of the governance framework component of the project.

¹ Maximum variation sampling, also known as heterogeneous sampling, is a purposive sampling technique used to capture the widest range of perspectives possible. It is a type of non-probability sampling, where the researcher does not randomly select participants from a population but instead intentionally selects participants that represent the greatest possible variation in the characteristics or experiences relevant to the research question.

Country		GIS/remote elated skills	low-cost	n identified monitoring tems		ent/partner ion officials	To	otal
	Men	Women	Men	Women	Men	Women	Men	Women
Kenya	8	5	30	6	5	4	43	15
Uganda	7	7	42	10	3	2	52	19
Tanzania	2	2	42	10	2	2	46	14
Ethiopia	18	2	*	*	0	0	18	2
Mozambique	2	2	*	*	2	2	4	4
Gender Total	37	18	114	26	12	10	163	54
Total		55		140		22		217

Table 1. Number of respondents

*There was no low-cost monitoring component in these areas by the time of evaluation.

The evaluation team included a monitoring and evaluation (M&E) specialist and three research assistants in Kenya, Uganda, and Tanzania. The research assistants were trained to use the structured guestionnaire incorporated into the Kobo application and were responsible for interviewing participants trained by the project. The M&E specialist conducted KIIs with officials from partner organizations and participating government officials. In some cases, the team took advantage of project governance workshops to interview participants who had participated in project activities. For respondents who were not available, the team sent a link to the questionnaire in Kobo for them to complete.

Data analysis

The collected quantitative data was deposited within the Kobo database, subsequently transferred to the Statistics and Data (STATA) software package, and cleaned before executing descriptive statistics, encompassing means and percentages. Qualitative textual data and notes obtained during FDGs were read, coded and analyzed to identify themes, patterns, and relationships, while simultaneously quoting and justifying statements previously articulated by the respondents.

Limitations

The evaluation encountered several critical limitations that necessitate careful consideration. One of the primary challenges faced was the restricted access to certain project beneficiaries, which may have introduced biases into the selfreported data.

When it was challenging to locate project beneficiaries, the evaluation team employed alternative methods. A Kobo link to the semistructured questionnaire was sent to respondents for self-administration, followed by phone call and email reminders.

However, it is important to note that this approach was not applicable to FGD participants, which introduced a limitation in the data collection process. Despite the efforts undertaken, the constraints in reaching some beneficiaries may have influenced the comprehensiveness of the data and should be considered when interpreting the study findings.

Results and discussion

Relevance: To what extent the project activities responded to the priorities and needs of the target groups and stakeholders

This evaluation examined the alignment of project activities with the identified priorities and needs of the target groups and stakeholders. Before the program's initiation, two primary concerns emerged.

First, forest monitoring systems in East Africa grappled with data scarcity and a lack of reliable up-to-date information on forest cover trends, accompanied by limited capacity. This challenge undermined the establishment of baselines crucial for monitoring and reporting on REDD+ and other climate-related targets. Second, there was a recognition of weak mechanisms for data exchange and harmonization among organizations and countries in the region.

To determine the most salient needs, the project team first conducted a stakeholder mapping exercise and needs analysis that built on previous EU initiatives such as the Biodiversity and Protected Areas Management (BIOPAMA) Programme.

Utilizing a capacity score scale where 3 signifies 'good', 2 is 'average', and 1 is 'poor', the mapping study at the project's outset revealed commendable proficiency scores of 3 for most countries in data collection. However, other proficiencies, including data sharing, data analysis, data management, and data processing, scored an average of 2.

To bridge these gaps, the project strategically trained a total of 207 national-level forest officials (150 men and 57 women) across Kenya, Uganda, Tanzania, Ethiopia, and Mozambique. The training covered a spectrum of skills, including data analysis, management, and processing; incorporating spatial data models; near-realtime techniques; Google Earth applications; data sharing; estimation; and hotspot mapping, among others.

In our assessment of the trainees, a significant 71% indicated that the training was highly relevant. Furthermore, 73% reported applying the acquired knowledge within their respective organizations. An illustrative example is the successful piloting of the Uganda Forest Monitoring system by the Uganda National Forest Agency after the initial training and exposure in Kenya.

Regarding organizational and country attitudes towards data sharing, the project facilitated country forums with officials from forest agencies in each country (totaling 82 participants, including 65 men and 17 women) to comprehend the countries' contexts regarding data governance and sharing issues. Legal expertise was enlisted to delve further into these matters and identify the necessary frameworks to encourage data sharing.

Although this process is ongoing, all partner countries have—to some extent—been able to share forest data with the OFESA observatory hosted at RCMRD. The data has been populated in the geoportal and linked to the OFESA webpage, making it accessible to the public and stakeholders through story maps, infographics, and analytical dashboards that provide key indicators at regional and country levels.

While progress has been made in addressing data sharing gaps, challenges persist. These include limited data sharing protocols between institutions within countries, issues with private data, the absence of data sharing policies/ guidelines in certain countries, the existence of different datasets within countries requiring updates, and various complexities associated with data sharing. Such complexities include high costs, methodological concerns, organizational mandates, confidentiality issues, and the need for agreements, particularly in cases of overlapping jurisdictions within institutions managing forest areas.

In conclusion, while the project has made significant strides in addressing data-related challenges, continuous efforts are required to overcome remaining obstacles, especially in fostering a culture of data sharing and developing robust policies and guidelines across partner countries.

Coherence: The extent to which other interventions support or undermine the project, and vice versa

During OFESA's implementation, noteworthy collaborations were established with various initiatives and programmes, adding significant value to the overall implementation strategy. Notably, partnerships with the Joint Research Centre (JRC) and BIOPAMA proved instrumental in identifying areas of synergy, including capacity building, technical interoperability, regional status reporting, and analysis of capacity needs.

The utilization of BIOPAMA networks played a pivotal role in identifying key forest agencies, fostering cooperation, and identifying capacity needs within member countries. Leveraging existing partnerships, particularly with RCMRD, facilitated smoother engagement with forest agencies that were already on board, encouraging them to share valuable data.

Additionally, strategic participation in events such as the International Union for the Conservation of Nature (IUCN)'s Africa Protected Areas Congress (APAC) and the Regional Resource Hub (RRH) Pavilion offered valuable platforms for information dissemination and idea exchange.

Discussions during these events brought forth key points, emphasizing the abundance of available information from various sources and the need to enhance its utilization across a broader audience. Challenges in sharing data for protected areas were acknowledged, highlighting the crucial roles of information management, sharing, and governance. The dialogues emphasized the importance of strengthening the role of regional observatories, fostering interactions with national agencies, ensuring the sustainability of observatories, and engaging in dialogues with special interest groups and other data providers in the region.

While commendable progress has been achieved, there are areas where the project could enhance its approach. Notably, it did not fully capitalize on engaging with similar initiatives in the region or involving regional economic communities, such as the East African Community (EAC), the Intergovernmental Authority on Development (IGAD), and the Southern African Development Community (SADC), as originally anticipated. Limited involvement and interactions with these entities were noted, and discussions with the Assistant Commissioner of Environment in Uganda suggested that leveraging contacts within the relevant country ministries might enhance collaboration more effectively.

As articulated by a trainee in Uganda, there is a recognized need to actively involve the East African community in facilitating information sharing within the region. This recommendation underscores the importance of exploring alternative channels, such as contact people within country ministries, to better engage with regional entities. The observation aligns with the broader goal of fostering a more inclusive and collaborative environment in which regional initiatives and economic communities are active participants in collective efforts toward effective information sharing and environmental governance.

Effectiveness: The extent to which project-specific outcomes/objectives have been achieved

The evaluation examined the degree to which specific results have been realized. The project was structured around two primary results: the development of a sustainable governance framework for the long-term service of OFESA, and the enhancement of human capacities in the management and utilization of environmental information—particularly forest-related data.

Overall, it was aimed that by the end of the intervention OFESA would have improved the design and use of geospatial information in decision-making in the region, and produced the achievements indicated under the column 'Objectively verifiable indicator with targets' in Table 2. The table shows that the project achieved most of its output-related targets.

Table 2. Results, targets, and achievements

Results	Objectively verifiable indicator with targets	Baseline	Achievements	Means of verification (MOV)
R1 - Development of a sustainable governance framework for the long-term service of the OFESA	At least 8 institutions with increased capacities to manage climate change-related planning and management	0	14 institutions with increased capacities	Progress Report year 3 (August 2022 – July 2023)
	At least 4 data sharing agreements developed between the project and relevant stakeholders to facilitate data sharing and exchange	0	3 agreements	Progress Report year 3 (August 2022 – July 2023)
	At least 20 data layers standardized and made available in the data portals	0	Over 20 layers available in geoportal, including regional and country data sets on protected areas, forest reserves, types, area coverages	Progress Report year 3 (August 2022 – July 2023)
	At least 2 formal collaborations are established with similar initiatives that complement each other	0	4 collaborations established (BIOPAMA-RRH, GMES & Africa, the Blue Planet Hub, IUCN and ESRI)	Progress Report year 3 (August 2022 – July 2023)
R2 - Human capacities in terms of management and use of environmental information are	At least 100 people with increased capacities to adapt to effective climate change-related planning and management in forestry	0	624 (483 men, 141 women)	Progress Report year 3 (August 2022 – July 2023)
strengthened, and information is available	At least 10,000 people access the OFESA website each year	0	5600 people access the OFESA website annually, including hits on geoportal access, video views, and file downloads	Progress Report year 3 (August 2022 – July 2023)
	At least one State of the Forests report on key topics agreed upon by participating countries and the EU	0	Under development	Progress Report year 3 (August 2022 – July 2023)

Developing a sustainable governance framework

Stakeholder mapping

The initiation of this result by the project team involved a comprehensive mapping study aimed at

identifying pivotal forest actors within the project's target countries and understanding the intricacies of their collaboration dynamics. In Kenya, the Kenya Forest Service emerged as a primary actor; in Tanzania, it was the Tanzania Forest Service (TFS) and the Tanzania Forest Community Network (MJUMITAA); Mozambique featured the National Directorate of Forestry (DINAF); in Ethiopia, it was Ethiopian Forestry Development (EFD); and in Uganda, the National Forestry Authority played a central role.

While the identification of key forest agencies was integral to the project's success, a noteworthy observation surfaced during this process. The project, predominantly focusing on government forest agencies, may have inadvertently neglected other influential organizations within target countries. A stakeholder in Kenya, reflecting on this, emphasized the potential oversight, stating:

"We are beginning to note that we could have also involved Kenya Wildlife Authority as a key partner, given their analogous initiatives and significant control over a substantial percentage of Kenya's forests."

The process of identifying stakeholders was beset with challenges that were compounded by the virtual nature of the mapping study given its rollout during the COVID-19 pandemic. While government forest agencies were diligently engaged, the virtual format may have limited the project's ability to receive responses from other crucial stakeholders. The engagement with the Tanzania Forest Service exemplified this challenge: meaningful collaboration with the organization took a full year to establish, despite persistent efforts.

This reflection underscores the importance of a holistic stakeholder engagement strategy, encompassing diverse entities beyond government agencies. It also highlights the adaptability required when faced with unforeseen circumstances, such as the constraints posed by a virtual environment during a global pandemic. Moving forward, the project could benefit from a more inclusive approach to stakeholder identification and engagement, ensuring broader representation of organizations that are instrumental in achieving its objectives.

Establishing collaborations

To build collaboration with analogous initiatives, the project demonstrated notable engagement with initiatives such as BIOPAMA, particularly through its establishment of the regional resource hub at RCMRD. However, the extent of involvement with other similar initiatives in the region—and with regional economic communities such as the East African Community (EAC), the Intergovernmental Authority on Development (IGAD), and the Southern African Development Community (SADC)—fell short of the anticipated level. Despite some initial contacts and meetings, the project's engagement with these entities did not reach the envisioned depth.

In discussions with the Assistant Commissioner of Environment in Uganda, an insightful suggestion emerged: more effective facilitation of engagement with these entities could be achieved through the designation of 'contact people' within the relevant country ministries, circumventing the need for direct project involvement. This perspective was echoed by a trainee in Uganda, who emphasized the imperative to involve the East African community actively, noting that:

"There is a need to bring the East African community on board to assist in providing information on how it can influence the sharing of information within the region."

This feedback underscores the potential benefits of a more nuanced and localized approach to engagement with regional entities. By leveraging existing structures within country ministries, the project can enhance collaboration and informationsharing within the region. This insight provides a valuable avenue for refining the project's strategy, ensuring more effective involvement with regional initiatives and economic communities, and thereby maximizing the impact and reach of its objectives.

Establishing a governance framework

At the time of evaluation, a formal governance framework for data sharing had not yet been established or endorsed by national forestry agencies in the target countries. Nevertheless, OFESA took steps in that direction by enlisting a legal expert to identify existing guidelines, regulations, and laws pertinent to data sharing within each country.

The evaluation also revealed insightful discussions with leaders and managers from identified forest agencies in Ethiopia, Kenya, Mozambique, Tanzania, and Uganda. For instance, in one of the FGDs with forest agency managers in Kenya during the governance workshops, the discussants recognized the need for improvement in the countries' existing forest data sharing models before expanding to a regional focus.

They also emphasized the need to boost perceptions of the benefits derived from data sharing among forest agencies, and advocated for the development of a system that fosters enhanced networking within and among countries to facilitate more robust data sharing. The ease of data sharing

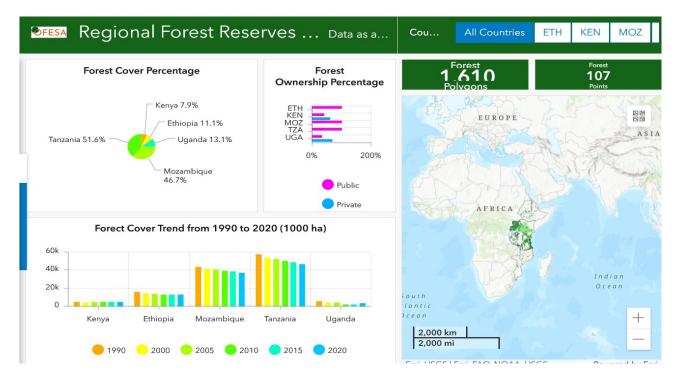


Figure 1. A glimpse into the geoportal's output illustrating visual representation of forest-related data

in relation to the providers' perceived benefit is exemplified by a forest agency official in Uganda:

"Over the years, RCMRD has helped us to train our officials and to analyze some of our forest data that would have been obscure. Our authorities therefore have no challenges sharing data with them."

Within the evaluation data, a key insight surfaced that highlights the imperative to strategically position the project as a facilitator primarily focused on advancing data sharing rather than being exclusively associated with capacity building. Notably, when respondents were queried about their associations with OFESA, 71% pinpointed the project's connection to capacity building for forest agency officials in data-related aspects, while 35% linked OFESA to governance and data sharing activities. By strategically communicating the project's central focus on elevating data sharing practices, there is an opportunity to align perceptions more closely with the overarching objective. This refined positioning has the potential to fortify partnerships and foster a more targeted impact in the realm of data sharing within the forest agency community.

The OFESA geoportal: Enhancing accessibility of forest data

The OFESA project achieved significant success in populating its dedicated geoportal with valuable forest-related data sourced from identified institutions. This comprehensive dataset encompasses crucial information such as data type, format, geographical coverage, accessibility, and the institutions' statuses regarding data sharing with external organizations and initiatives.

One of the notable successes in this area is the target countries' agreement to actively share their available forest-related data, which contributes considerably to enriching the **geoportal's** content. The tool houses a diverse array of data layers and maps, presenting a comprehensive view of forest-related information. As shown in Figure 1 below, part of its output is displayed through visual representation.

Despite these accomplishments, challenges persist in fully establishing the geoportal as a centralized hub for invaluable forest data. Overcoming these hurdles remains pivotal to realizing the vision of fostering collaborative efforts and supporting well-informed decision-making within the realms of forestry and environmental management. One suggestion to this end is finding more and better ways to communicate the existence of the portal.

Strengthening human capacities

The execution of Result 2 unfolded through two primary avenues: i) addressing forest data/mappingrelated capacity gaps within target countries by training agency officers, led by RCMRD, and ii) supporting ongoing low-cost and viable forest data collection initiatives, and engaging forest agencies on data sharing and governance, predominantly led by CIFOR-ICRAF. Table 3 shows the number of trainees that were trained under each category.

Country	Trained in remote ser related ski	nsing-	Trained in low-cost m systems		Participate data shari and goveri engageme	ng nance	g Gender tota		Total
	М	W	М	W	М	W	М	W	
Kenya	18	12	175	37	12	5	205	54	259
Uganda	14	11	102	18	12	5	128	34	162
Tanzania	18	4	56	29	13	2	87	35	122
Ethiopia	20	2			18	1	38	3	41
Mozambique	15	11			10	4	25	15	40
Total	85	40	333	84	65	17	483	141	624

Table 3. Number of respondents that participated in OFESA forest data capacity initiatives, by country and gender

Training forest agency officers on data/ mapping-related capacity gaps

The activities were completed in accordance with the pre-determined schedule of events, which encompassed regional training sessions followed by country-specific trainings in five countries, aimed at addressing specific gaps in forest monitoring. As of August 2023, a total of 125 national-level forest officials (85 men and 40 women) were trained. The training covered a variety of themes, including spatial data models, near real-time, Google Earth, data sharing, estimation and hotspot mapping, among other things.

Insights into the evaluation data gauged trainees' perspectives, revealing that 71% found the training highly relevant, with 73% subsequently applying the acquired knowledge within their respective organizations. One trainee from a forest organization in Uganda shared that:

"I gained a lot of practical knowledge that has enabled me to enhance my report writing and publications. Additionally, I can now critically evaluate other publications as I have a better understanding of where some results originate."

Another trainee in Kenya said:

"Our organization works closely with the Kenya Forest Service to conserve the environment, and the training provided was crucial in bridging the knowledge gap necessary for mapping environmental resources."

The trainings have proven to be highly valuable to the respondents and have enabled them to improve their work performance. Challenges identified during training included the need for extended sessions, a call for competence assessments to tailor content, and instances where acquired knowledge couldn't be applied due to a lack of equipment and/or software in the trainees' organizations.

Supporting low-cost forest monitoring initiatives

The project piloted low-cost forest monitoring initiatives in Kenya, Uganda, Tanzania, and Ethiopia. A scoping exercise was carried out to identify existing initiatives in this vein that were being undertaken by forest agencies and organizations in the target countries, and then enhance the capacity of community scouts, forest rangers, and other forest-related officers in the identified degradation/ restoration hotspots. These officers were responsible for collecting, analyzing, and transferring data to a central database for decision-making purposes. Highlights in terms of the achievement of this component include:

- **Kenya:** Expansion of the Real-Time Forest Alert System resulted in 1,312 satellite-based alerts, aiding decision-making in the Arabuko Sokoke and Mau forests. An 135% increase in incident reporting showcased the system's efficacy.
- **Tanzania:** Collaboration with MJUMIITA led to the digitization of forest monitoring tools, empowering community leaders and members. The tool's simplicity and perceived benefits contributed to successful adoption.
- **Uganda:** The forest alert system pilot in Mabira, Mpanga, Budongo, and Kalinzu Central Forest Reserves facilitated improved reporting and monitoring, particularly in tracking positive and negative activities.
- **Ethiopia:** OFESA, with the Ethiopian Biodiversity Institute, initiated a forest alert system pilot in the Kafa Biosphere Reserve, involving various stakeholders. The ongoing assessment aims to provide insights into activities and lessons learned.

While the training of community scouts and rangers yielded positive results, the implementation of the low-cost monitoring approach in all participating countries faced notable infrastructure-related hurdles. These challenges included the inadequacy of essential devices—such as tablets, computers, and power banks—for seamless data collection and analysis. The absence of electricity in some areas further compounded the logistical challenges.

The project helped to address some of the gaps identified, for instance by facilitating feedback between local forest officials/rangers and national-level staff, and training local officials in back-end skills (such as viewing, analyzing and downloading data on their forest area). It also provided equipment (Android phones) in some sites, such as the Mau and Arabuko Sokoke forests, to support data collection.

OFESA's objective to pilot selected hotspots for low-cost monitoring raises legitimate concerns about the scalability and effectiveness of enhancing forest data collection and use. The limitations that were encountered indicate that success may require extensive investments beyond the project's current scope. Therefore, advocating for wider support and investments is crucial to ensure the sustained success of employing lowcost approaches for the collection, analysis, and utilization of forest data on a broader, countrywide scale.

Another critical aspect highlighted in the evaluation pertains to the utilization of data collected through low-cost monitoring methods. While positive examples were scarce in Kenya and Uganda, where the collected data's impact on decision-making was not sufficiently demonstrated, a commendable exception was observed in Tanzania. There, the collected data was not only reported publicly but also actively utilized in community meetings, showcasing a tangible connection between data acquisition and locallevel decision-making processes.

To address these challenges and enhance the overall effectiveness of low-cost monitoring initiatives, considerations should include:

 Infrastructure investment: Prioritize wider support and investments to overcome infrastructure challenges, ensuring the availability of necessary devices and power sources for comprehensive data collection and analysis.

- Scalability planning: Acknowledge the limitations of hotspot piloting and strategically plan for scalability, recognizing the need for broader investments to extend the impact across the entire country.
- Communication and training: Strengthen communication channels and training modules to emphasize the practical applications and benefits of collected data, fostering a clearer understanding of data utilization among stakeholders.

As the project progresses, these considerations can pave the way for a more robust and impactful implementation of low-cost monitoring approaches, contributing significantly to effective forest data collection and decision-making at both local and national levels.

Sustainability: The potential sustainability of the project's results

Although the data sharing initiative on the observatory portal is commendable, it is crucial to recognize that its long-term success depends on several critical factors, with particular reliance on the ability of participating countries and institutions to contribute data effectively.

To ensure the observatory continues to thrive, its governance framework and portal must exhibit tangible benefits to stakeholders and the public. This involves not only tackling policy challenges faced by countries but also aligning with regional interests.

Key considerations for sustainable success include:

- Crafting incentives tailored to the needs of stakeholders, actors, and specific country contexts, and designed to motivate active data contributions and foster a genuine demand for the observatory's offerings
- Recognizing the scarcity of technical expertise and equipment in institutions, continuous and targeted capacity building, to ensure that participating entities are well-equipped to navigate evolving technologies
- Acknowledging the rapid pace of technological advancements, supporting participating institutions in acquiring modern tools and software: instances like those in Uganda, where a lack of supporting software impeded the application of acquired knowledge, emphasize the need for proactive support

- Addressing financial constraints faced by institutions such as the Kenya Forest Service and Uganda National Forest Authority: providing financial assistance for essential software ensures that practical application is not hindered
- Enhancing collaboration and communication: the implementation team ought to serve as a cornerstone in nurturing cooperation and communication pathways among cooperating institutions. Establishing an interactive platform where actors can share insights—on effective practices, forest inventory collection, and policy development and execution—promotes collective learning

Aligning technological backing, financial aid, and collaborative learning opportunities constitutes a strategic approach to sustainability. The implementation team's initiative in harmonizing these aspects will bolster the observatory's results, leaving a long-lasting impact on forest data management and decisionmaking. This comprehensive approach guarantees that the observatory not only survives but flourishes in the ever-changing realm of environmental data stewardship.

Recommendations

- Undertake efforts to explore additional avenues for collaboration with regional initiatives and communities. Since most of these are working in various similar initiatives with country forestry/environment ministries, OFESA can utilize contacts within these bodies to facilitate collaboration on similar initiatives, rather than solely engaging with regional initiatives directly. Furthermore, OFESA can enhance stakeholder engagement strategy to encompass a diverse range of organizations crucial to achieving project objectives, extending beyond the purview of national forest agencies.
- Position the project as a facilitator primarily focused on advancing data sharing to all the stakeholders and beneficiaries. Strategically communicate the central focus on elevating data sharing practices, moving beyond exclusive associations with capacity building. This alignment enhances perceptions, closely resonating with the overarching objective.
- Enhance communication strategies regarding the OFESA portal and its products to ensure widespread awareness among stakeholders and beneficiaries about its existence and value. Tackle obstacles impeding the overall efficacy of

low-cost monitoring initiatives, encompassing the deficiency of essential devices like tablets, computers, and power banks for smooth data collection and analysis. Address issues related to the utilization of collected data by communities and organizations, ensuring that the data is effectively leveraged. Additionally, explore strategies to scale low-cost monitoring to wider areas within the countries, thereby enhancing the utilization of forest data on a comprehensive, country-wide scale.

- Consider extended training sessions, conduct competency assessments, and recognize the rapid pace of technological advancements.
 Support participating institutions in enhancing technical expertise while acquiring modern tools and software to ensure effective utilization of knowledge.
- Ensure the governance framework and portal demonstrate tangible benefits to stakeholders and the public for the observatory's sustained success. Craft additional incentives aligned with stakeholder needs and actively address financial constraints, technical expertise scarcity, and evolving technologies to support long-term viability.

References

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Annexes

Annex 1. TORs for the final evaluation of the East and Southern Africa Forest Observatory (OFESA) project

1. Brief introduction

Current forest monitoring systems in East Africa are hampered by a lack of reliable and updated data/information on forest cover trends. This undermines the establishment of baselines for monitoring and reporting on REDD+ and other climate-related targets/obligations. In addition, it limits policymakers, funders, practitioners, and citizens' access to comprehensive data/ information on forests that can support better environmental and socio-economic decisionmaking.

In 2018, CIFOR and RCMRD developed a prototype for a regional forest observatory for Eastern Africa, after two major needs were identified: a) the need for better, regular and more systematic information on forest trends and threats that provides data for national and regional reporting; and b) the need for mechanisms of data exchange and harmonization.

The East and Southern Africa Forest Observatory (OFESA) project was designed to answer these needs by providing a platform for sharing, exchanging, and accessing data and information related to East and Southern Africa's forests. Since 2020, the project has been implementing various activities in Ethiopia, Kenya, Mozambique, Tanzania and Uganda anchored on two main objectives: a) development of a sustainable governance framework for the long-term service of OFESA, and b) strengthening human capacities in terms of management and use of environmental information.

With the project now coming to an end, a final evaluation is being conducted to determine the relevance and level of achievement of project objectives, development effectiveness, and project alignment towards impact and sustainability.

2. Scope and purpose of the final evaluation

The purpose of the final evaluation is to:

Assess the intended and unintended outcomes of the project and/or evaluate the project's contribution to the achievement of those outcomes.

- Assess effectiveness and sustainability of the project strategy and activities.
- Identify and document key lessons learned and best practices, and propose practical recommendations for follow-up intervention or scaling up.

3. Key evaluation questions

The key areas that the evaluation is intended to answer are:

Relevance: To what extent the project activities responded to the priorities and needs of the target groups and stakeholders.

Coherence: The extent to which other interventions support or undermine the project, and vice versa. (The evaluation will examine both internal and external coherence, where internal coherence addresses synergies between the different projects/programmes run by the EU and external coherence refers to similar interventions executed by other implementers.)

The evaluation will look at specifics of how OFESA has been of support or has been supported by various related programs (look at synergies, gaps and opportunities). Consider programmes that were mentioned in the project document, i.e. BIOPAMA, GMES & AFRICA Programme, OFAC and others that will be mentioned during data collection (which should also include those not funded by EU but related to OFESA where applicable/possible).

Effectiveness: The extent to which projectspecific outcomes/objectives have been achieved. The evaluation will focus on the quality of the intervention, the outcomes and the outputs (not the activities). The assessment of effectiveness should answer the following questions:

- Has the intervention achieved the outcomes and outputs as indicated in the log frame?
- What are the intended and unintended outcomes of the project? What were the major factors affecting the achievement or nonachievement of the set objectives? If there are gaps between what is achieved vs. planned, what are those gaps and what are the reasons for their existence?
- What are the other opportunities? What could have been done better?

Sustainability: The evaluation will assess the potential sustainability of the project's results. The following questions will be considered:

- What is the likelihood that the project results will continue to be useful or supported after the end of the project?
- What are the key risks that may affect the sustainability of the project benefits?

4. Methodology

This evaluation will use a mixed-method approach where quantitative data will be collected from direct beneficiaries of the project (i.e. selected trained village leaders, trained scouts/ rangers and officials from forest agencies in target countries), while qualitative data will be acquired from selected project team members, the project partner (RCMRD), key officials from the participating forest agencies, and other stakeholders. The respondents will be categorized into six main categories: 1) officials from forest agencies/organizations engaged by project (e.g. KFS); 2) officials participating in the governance/ data sharing component of the project; 3) scouts/ rangers/community members/village elders engaged in the low-cost component of the project; 4) officials from forest organizations trained by RCMRD on forest monitoring and other techniques; 5) relevant project staff (CIFOR-ICRAF and RCMRD) and 6) other stakeholders relevant to the project.

A representative sample for each type of respondent will either be calculated or purposively determined based on the available number and type of beneficiaries that were engaged in the target countries. For instance, in Mozambigue and Ethiopia where low-cost monitoring of the project was not implemented, the evaluation will purposively select direct beneficiaries/stakeholders that participated in the governance and regional/country forest monitoring trainings, while in Tanzania the evaluation will use Krejcie and Morgan sample size formula² to calculate the number of village elders/community, basing the population as the total number of participants in low-cost activities in Tanzania and purposively selecting officials that participated in the governance/data sharing and RCMRD-led forest monitoring component of the project.

A range of project documentation will also be reviewed, including project progress report, field reports and other reports to collect information on design, implementation, and operation of the project. The resulting evidence will inform the development of the evaluation conclusions and recommendations.

During the evaluation, the following exercises (Table 1) will take advantage of the governance workshops being conducted from 3-23 May for ease of location of respondents.

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² Bukhari S A. 2021. Sample Size Determination Using Krejcie and Morgan Table. 10.13140/RG.2.2.11445.19687.

Table 1. Target respondents and tools to be administered.

Туре	Country	Method of sample determination	Number	Type of tool
Individuals participating in the governance/data sharing component of the project and that have been trained by RCMRD	Kenya	Purposive	15	Questionnaire
Scouts/rangers/community members/village elders engaged in the low-cost component of the project and officials facilitating it		Purposive	15	Questionnaire /Kl
Relevant project staff	-	Purposive.	3	KI
Individuals participating in the governance/data sharing component of the project and that have been trained by RCMRD	Tanzania	Purposive	15	Questionnaire
Scouts/rangers/community members/village elders engaged in the low-cost component of the project and officials facilitating it	-	Sample size formula	15	Questionnaire /Kl
Individuals participating in the governance/data sharing component of the project and that have been trained by RCMRD	Uganda	Purposive	15	Questionnaire
Individuals participating in the governance/data sharing component of the project and that have been trained by RCMRD	Mozambique	Purposive	15	Questionnaire
Individuals participating in the governance/data sharing component of the project and that have been trained by RCMRD	Ethiopia	Purposive	15	Questionnaire

Annex 2. Questionnaire for officials from forest agencies/organizations

Dear participant: in order to understand how well the OFESA project was executed, its usefulness and utility, we would like to ask for your feedback. All information that you give will be treated as strictly confidential. Do you consent? YES INO I

Q0. Background information

i. Country	
ii. Name of organization	
iii. Name of official	
iv. Designation	

Q1. How have you been involved in OFESA? (Mark as appropriate):

- □ I have received training/My organization has received training
- □ I am involved in governance/data sharing activities (workshops/meetings)
- □ I am involved in writing the State of the Forests report
- □ Other (please specify)

BUILDING HUMAN CAPACITIES

Q2. If you or your organization has received training, please indicate which training you received (mark as appropriate):

- □ Google Earth engine
- □ Forest carbon estimation and hotspot mapping
- □ Spatial data models
- □ Near real-time forest monitoring
- □ Data sharing
- □ Other (please specify)

Q3. How relevant was/were the training/s for you/your organization?

1	2	3	4	5
Not relevant	Hardly relevant	Fairly relevant	Relevant	Very relevant

Q3(a). Explain your choice:

Q4. Have you been able to use the knowledge gained through trainings organized by the project?

 \Box YES

 \square NO

Q4.a). If Yes, please provide concrete examples

Q5. How would you rate the design/organization of trainings?

1	2	3	4	5	n/a
Too academic	Partly too academic	Well balanced	Partly too practical	Too practical	Cannot/do not want to answer

Q6. What, in your opinion, could have been *improved*? Why? (Probe on the topics covered, mode of execution...)

Q7. How could OFESA support your work/your organization's work further in the areas of forest data collection, analysis, data sharing and governance?

Data sharing:

Q8. Do you have a data sharing policy in your organization?

□ YES

🗆 NO

Q9. Do you have any data sharing policies/agreements with any other organizations/agencies?

- □ YES
- \square NO

Q10. In the organizations/agencies you are sharing data with, are you collaborating in any activities, e.g. implementing a project/activities together?

□ YES

 \square NO

Q11. How are you facilitating these data sharing policies/agreements?

MoU's	
LoA's	
Work plans	
Other (specify)	

Q12. Are you in any fora/committees with other similar organizations/stakeholders where you meet and share data/information?

□ YES

 \square NO

Q13. Name and describe how this/these fora/committees operate

Q14. How are you benefiting from these foras/committees?

Q15. What are existing key opportunities in data sharing within the forestry sector in your country that you think OFESA could work with?

Thank you for your feedback

Annex 3. Talking points/questions for discussion with project staff at CIFOR-ICRAF and RCMRD

You have been identified as an important stakeholder in this process to help us understand how well this approach was executed, and the usefulness and utility of the results from this project. We kindly ask you to volunteer information freely to this exercise by answering questions. All information that you give us will be treated as strictly confidential. Do you consent?

- 1. To what extent has the project been able to achieve a sustainable governance framework? What were the major factors affecting this achievement or non-achievement? What are the existing gaps? What existing opportunities do you think the project can take advantage of? What do you think could have been done better in developing a sustainable governance framework?
- 2. To what extent has OFESA been able to build human capacities in terms of management and use of environmental information? (Look at: a) capacity in, and awareness of the benefits of, data sharing; b) capacity of community scouts and forest rangers in degradation/restoration hotspots to collect, analyze and transfer data to a central database). What are the gaps in terms of execution of this activity? What opportunities do you think the project can take advantage of? What could have been done better?
- 3. What is the likelihood that the project's results will continue to be useful or supported after the end of the project? What are the key risks that may affect the sustainability of the project benefits?

Annex 4. Talking points/questions for scouts/rangers/community members/village elders engaged in the low-cost component of the project

- 1. What positive changes has the low-cost forest monitoring system brought?
- 2. Are there any situations where the data collected has been used to make decisions /undertake actions? Please describe
- 3. What challenges have been experienced, or do you foresee, regarding the use of the approach?
- 4. What are your proposed solutions?
- 5. What positives do you see this approach bringing, and what do you think can be done better?

Annex 5. Questionnaire for officials from forest agencies/organizations engaged by the project

You have been identified as an important stakeholder in this process to help us understand how well the OFESA project was executed and gauge its usefulness and utility. We kindly ask you to volunteer information freely to this exercise by answering questions. All information that you give us will be treated as strictly confidential. Do you consent? YES INO

- 1. OFESA has been working on addressing various identified capacity gaps in forest data collection, analysis, data sharing and governance. Which areas have you been involved in within the project?
 - 1. Training/equipping of forestry agencies and their partners to collect data on forest trends
 - 2. Training/equipping of lead forestry agencies and their partners to collect/analyze data on forest trends
 - 3. Data sharing and governance

If (1): What have you been trained on through the project?

- 1. Google Earth Engine
- 2. Forest carbon estimation and hotspot mapping
- 3. Spatial data models
- 4. Near real-time forest monitoring
- 5. Data sharing

If (1), is there any equipment that you have received through the project? YES \square NO \square

If Yes, please name:.....

If (2), have you been involved in any of the project's data sharing and governance workshops/meetings? YES $\Box\,$ NO $\Box\,$

- 2. How has the training and equipment (if any) you received through the project helped address your needs?
- 3. How has the data sharing and governance component of the project helped address your needs?
- 4. What are some of the areas that you think the project could have addressed better? (*Discuss training, equipment and data sharing and governance*)
- 5. What elements/aspects of the project would you say deserve to be scaled up/replicated in future initiatives? (*Probe: Name the elements; for each of the issues mentioned, ask why they say so. What aspects need modifications? What are the suggestions for the modifications?*)
- 6. What elements deserve to be dropped or modified? (where modified, probe how)

About OFESA

OFESA provides a platform for sharing, exchanging, and accessing data and information related to East and Southern Africa's forests. The objective of the observatory is to produce a comprehensive and harmonized regional dataset on the latest trends and threats to forests, and to make information useful and easily accessible to policymakers, funders, forestry practitioners and citizens. By informing decision making, OFESA supports five countries in the region – Ethiopia, Kenya, Mozambique, Tanzania and Uganda – to meet their climate and environment targets. In these five countries, OFESA works closely with focal point institutions from the Kenya Forest Service, the National Directorate of Forests Mozambique, the Ethiopia Forestry Development, the Tanzania Forest Service and the National Forestry Authority Uganda.

• ofesa.rcmrd.org/en

About CIFOR-ICRAF

CIFOR-ICRAF harnesses the power of trees, forests and agroforestry landscapes to address the most pressing global challenges of our time - biodiversity loss, climate change, food security, livelihoods and inequity.

oifor-icraf.org

About RCMRD

RCMRD is an inter-governmental organization established in 1975 under the auspices of the United Nations Economic Commission for Africa and the former Organization of African Unity (today the African Union). RCMRD is based in Nairobi, Kenya with 20 contracting member states in the Eastern and Southern Africa regions. RCMRD is a Premier Centre of Excellence in the provision of geo-information and allied technologies for sustainable development in member states and other stakeholders. The RCMRD training institute offers training in cartography & GIS, photogrammetry & remote sensing, cartography, land surveying, information technology, accounting courses, etc.

rcmrd.org

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