

Restoration Challenge Grant Platform for Smallholders and Communities, with Blockchain-Enabled Crowdfunding

Review PIF and Make a recommendation

Basic project information

GEF ID

10637

Countries

Regional (Cameroon, Kenya)

Project Name

Restoration Challenge Grant Platform for Smallholders and Communities,
with Blockchain-Enabled Crowdfunding

Agencies

IUCN

Date received by PM

7/24/2020

Review completed by PM

1/28/2021

Program Manager

Ulrich Apel

Focal Area

Land Degradation

Project Type

MSP

PIF

Part I ? Project Information**Focal area elements****1. Is the project/program aligned with the relevant GEF focal area elements in Table A, as defined by the GEF 7 Programming Directions?**

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Not fully.

- With regard to project information: please add the two pilot countries Kenya and Cameroon in the portal, in addition to "global";

- As an overarching remark: the main thrust of the project concept should be presented in way that the focus on innovation, in particular on the block-chain enabled crowd-funding and other block-chain elements is better carved out. The main objective is to facilitate, support, and mobilize investment in smallholder and community-led restoration, and the direct achievement of GEBs critical landscapes and enhanced resilient economic development and livelihoods is secondary for this MSP (see project objective). The innovative approach to bring to facilitate, support, and mobilize investment should thus be presented as the core element of the project and how block-chain elements and mobile technology will contribute to that.

- Further, most questions by reviewers and the public when reading the concept will center around this innovative approach, the block-chain elements, and how those can lead to a change or addressing a gap in the restoration movement. The concept will need to elaborate on such questions as the topic is new.

01/28/2021: Has been adequately addressed. The selection of "regional" is correct as the two countries are both from the Africa region. However, this has implication for Table D and E (see respective comments below).

Cleared

Agency Response

Under Part I: **Project Information section in GEF Project Portal, project changed from ?Global? to ?Regional?** with Cameroon and Kenya selected. An option to include ?Global? along with the two pilot countries does not appear in the Portal.

? **The Project summary and other relevant parts of the proposal have been updated to more clearly describe the innovative elements of the Platform** including integration and use of blockchain technology, crowdfunding, and more. As described in the proposal, the blockchain technology and digital blockchain ledger are integrated throughout the Platform-supported restoration value chain, from species selection, seed sourcing, propagation, planting and maintenance of tree seedlings, and incentive payments to Restoration partners. When coupled with other components of the Platform including the mobile application and network facilitating photographing, sharing, and verification of geo-referenced photos of restoration work, and outreach and capacity building on best-practice restoration, the technology and approach will allow for transparency, facilitation of real-time monitoring, enhanced learning and evaluation, and the building of trust among participants that is critical to successful mobilization of crowdfunding and scaling up.

Indicative project/program description summary

2. Are the components in Table B and as described in the PIF sound, appropriate, and sufficiently clear to achieve the project/program objectives and the core indicators?

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Not fully.

The reviewers have several questions and comments on the project design components throughout table B and the text, which are listed below. Please take them into account as appropriate when revising the PIF:

- Output 2.3: ?At least X nurseries? should be quantified, at least with a conservative number as it is ?at least?.

- Are the smallholders to provide the initial investment needed to engage in the restoration activity and then the platform pays them back? If so, how do we know the smallholders have the financing for the initial investment?
- What happens if there are more requests for payment than there is financing available?
- Will the project build on any of the initial training/capacity building that would have taken place under TRI?
- Clarification on land tenure and rights would be welcome to better understand who exactly are the targeted beneficiaries that can plant and be rewarded without risk of conflict or uncertainty about the reality of the restoration ownership. There is no information about ?ownership? of the tree: who owns the tree, and can use NTPF?
- There is no clear indication of what kind of trees will be planted and for which purpose: agroforestry? exotic and fast growing trees for charcoal production? Improved silvopastoral systems? Clarification on that point would be welcome to ensure alignment with GEF objectives and strategy (avoid exotic tree species).
- Duration of the project: Given the project is very innovative and plans actual restoration works, a duration of 3 years may be too short to implement all the activities until the phase 2? The last payment to the Restoration Partners per verified tree maintenance occurs only after 16 months and a longer period between each verification could ensure a better monitoring of the project results.

01/28/2021: Has been adequately addressed.

Cleared

Agency Response

? Output 2.3 changed to ?**At least 1 tree nursery(s) in each target landscape established** and/or strengthened and providing seedlings of suitable species and genetic stock to meet local demand, with point-of-transaction training on planting and care?

? **Costs for provision of high quality and appropriate tree seedlings** for Restoration partners will be covered by the Project and/or Government partners (TBD in PPG stage). Reimbursement costs to tree nurseries have been broken out in Table 1 of the PIF and described under Component 1, Outputs 1.2, 1.4, 1.5, as well as at the top of section C, The proposed alternative scenario with a brief description of expected outcomes and components of the project. Incentive payments covering the costs of establishing tree stands are conservatively based on a 2020 ICRAF paper that examined costs of tree stand establishment in the Gambia, which has a dryer climate than found in Cameroon and parts of Kenya (costs of establishing tree stands are typically higher in

dryer climates). The size of incentive payments to Restoration partners may be further refined in the PPG stage pending consultation with partners.

? PPG-stage work to identify partnering communities and suitable landscapes for restoration will provide a rough estimate for the potential size of the area that can be brought under restoration through project-supported tree planting, as well as the number of trees that can be planted using appropriate, best-practice tree spacing. In addition, as Restoration partners are engaged, registered and trained, project partners will keep track of the projected number of trees to be planted and maintained, based on consultation with Restoration partners and baseline analysis of restoration opportunities in partnering communities and landscapes. Depending upon local demand, and provision of co-financing from partnering country governments and/or crowdfunding, the number of Restoration partners may need to be capped **to ensure that sufficient funding is available to cover all verified requests for payments for tree planting and subsequent maintenance.** [Above clarification added to text of PIF under Output 2.1.]

? **Building on TRI capacity building and training and infrastructure** ? The project will make use of Species Threat Abatement and Recovery (STAR) assessments developed under TRI for both Kenya and Cameroon TRI landscapes and that include high resolution maps of degradation and mapping for threatened species and threats. There is also an online course on FLR fundamentals developed under TRI in partnership with Yale University's Environmental Leadership and Training Initiative (ELTI) that may be drawn upon by the Platform to train different project partners (for example, tree nursery staff and government outreach staff). The TRI program infrastructure, including websites, newsletters, and project teams and networks in Kenya and Cameroon will be drawn upon as appropriate to help increase awareness of the Platform opportunities under Component 2. And the TRI network will be a key means for sharing lessons learned developed through the Platform under Component 3.

? **Use of appropriate species** ? A key focus of work detailed further under Outputs 2.2 and 2.3 will be ensuring the use of appropriate, high-quality, genetically diverse seedlings for project-supported restoration. An assessment of livelihood and ecological benefits of restoration in Cameroon revealed that lack of attention to species selection is partly responsible for the failures observed in landscape restoration, including over-dependence on exotic species, poor species-site matching and no consideration of genetic diversity. Poor diversity was also confirmed as a major constraint to successful restoration by a Bioversity global survey . Under Component 2, the project will build capacity throughout the seed sourcing and seedling propagation value chain in selected landscapes, and including among seed collectors, seed centers and nurseries. Bioversity International's long-standing program of work in this area and substantial in-house expertise and related tools including the SeedIT application and Diversity for Restoration tools will be drawn upon. The project will only cover costs and provide incentive payments to Restoration partners that use appropriately sourced seedlings ? as recorded and verified through the project mobile application, records of partnering tree nurseries, and random field verification. This includes avoidance of exotic, non-native species. Bioversity has already identified 420 native tree species used in restoration in Cameroon. Bioversity will compile a list of native tree species of interest for this project

based their uses and services, habitat, conservation status, importance for women, and livelihood potential. A similar assessment of suitable species for restoration in Kenya will be done in the PPG stage of this project. Restoration partners will be able to choose among a subset of appropriate tree species, depending upon their utility and preference, to support agroforestry, sustainable timber production, fruit production, and more.

[Above text clarification added to the project text under Component 1, Outputs 1.3, 1.4, 1.5.]

? **Clarification on land tenure and rights** - Community support, avoidance of any unintended conflicts over access to the benefits of tree planting/restoration, and the sustainability of Platform-supported restoration is threatened wherever and whenever there is uncertainty of ownership over land under restoration, uncertainty on access rights to the timber and non-timber forest products generated by restoration activities, and/or potential for restoration to exacerbate inequality. PPG-stage work to identify suitable landscapes and partner communities for Platform-supported restoration will, following IUCN ESMS procedures, carefully screen against the selection of landscapes and partner communities where land tenure of potential restoration sites is not clear, where access rights to the timber and non-timber forest products generated by restoration activities is unclear, and/or where Platform-supported restoration has the potential to exacerbate inequality in partner communities. [Above text clarification added to the project text under Component 1, Outputs 1.3, 1.4, 1.5.; and to the table in the section on Risks]

? **Project duration and frequency of maintenance payments** ? While the public web platform to facilitate crowd-sourced funding of restoration will not be live until Year 2, work to develop the platform, including integration of blockchain in the mobile application and upstream seed sourcing and seedling provision will begin in Year 1 of the Project to ensure sufficient time to develop the underlying software and systems. Intervals for tree maintenance follow-up verification and payments has been changed from 4-month intervals to 6-month intervals to facilitate better monitoring and reduce transaction costs. The life-cycle for tree growing is a process requiring at least five years or more, even when using fast-growing tree species. While the GEF-supported components of the project will only last 3 years, unless a follow-up project is developed and approved, it is anticipated that a mix of crowd funding, partner government and community support will ensure a sustainable flow of funds to support continuation of the Platform and platform-supported restoration work.

Co-financing

3. Are the indicative expected amounts, sources and types of co-financing adequately documented and consistent with the requirements of the Co-Financing Policy and Guidelines, with a description on how the breakdown of co-financing was identified and meets the definition of investment mobilized?

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Correction request:

Source of Co-financing: in "Executing partner type" field, Biodiversity International has been classified as "CSO", but in the table C for co-financing, it has been classified as type "other". Please make sure that categories for the same partner institution are consistent by entering "CSO" as type in Table C.

03/03/2021:

Has been corrected.

Cleared

Agency Response **2/8/2021**: Correction made to Table C

GEF Resource Availability

4. Is the proposed GEF financing in Table D (including the Agency fee) in line with GEF policies and guidelines? Are they within the resources available from (mark all that apply):

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Yes.

However, please change country to "regional" in line with country selection "regional" in part 1.

03/03/2021:

Has been corrected.

Cleared

Agency Response **2/8/2021**: Correction made to Table D

The STAR allocation?

Secretariat Comment at PIF/Work Program Inclusion n/a - funded by global set-aside

Agency Response

The focal area allocation?

Secretariat Comment at PIF/Work Program Inclusion 08/27/2020: Yes.

Agency Response

The LDCF under the principle of equitable access?

Secretariat Comment at PIF/Work Program Inclusion n/a

Agency Response

The SCCF (Adaptation or Technology Transfer)?

Secretariat Comment at PIF/Work Program Inclusion n/a

Agency Response

Focal area set-aside?

Secretariat Comment at PIF/Work Program Inclusion 08/27/2020: Yes.

Agency Response

Impact Program Incentive?

Secretariat Comment at PIF/Work Program Inclusion n/a

Agency Response

Project Preparation Grant

5. Is PPG requested in Table E within the allowable cap? Has an exception (e.g. for regional projects) been sufficiently substantiated? (not applicable to PFD)

Secretariat Comment at PIF/Work Program Inclusion
08/27/2020: Yes.

However, please change country to "regional" in line with country selection "regional" in part 1.

03/03/2021:

Has been corrected.

Cleared

Agency Response **2/8/2021**: Correction made to Table E
Core indicators

6. Are the identified core indicators in Table F calculated using the methodology included in the corresponding Guidelines? (GEF/C.54/11/Rev.01)

Secretariat Comment at PIF/Work Program Inclusion
08/27/2020: Yes.

However, please consider to enter a very conservative (tier 1) estimate for CC-M (core indicator 6).

01/28/2021: Has been estimated and entered into core indicator table.

Cleared

Agency Response ? Using tons/ha figures from the TRI restoration projects in Cameroon and Kenya Arid and Semi-Arid lands, we have a rough estimate for direct emissions reductions of 64 tCO₂eq mitigation /ha and 94 tCO₂eq mitigation / ha respectively. If we estimate that the 5,000 ha under restoration target will be divided equally between Kenya and Cameroon, we can conservatively estimate that the project will result in **395,749 tCO₂eq direct mitigation**.

Project/Program taxonomy

7. Is the project/program properly tagged with the appropriate keywords as requested in Table G?

Secretariat Comment at PIF/Work Program Inclusion 08/27/2020: Yes.

Agency Response

Part II ? Project Justification

1. Has the project/program described the global environmental/adaptation problems, including the root causes and barriers that need to be addressed?

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Not fully.

- The rationale for choosing Cameroon and Kenya is unclear. Beyond their commitment under the Bonn Challenge and their participation in the TRI Program, it would be good to know more why these countries were chosen and not others and why two and not a different number. The proposal simply mentions "Links to the TRI program have informed the initial selection of partnering countries and landscapes", which is somewhat vague. Further, this explanation should be provided upfront in the project summary chapeau (currently 2 paras). Please also add here that this is a global project but starting with pilots in those two countries. Other countries may benefit from component 3, through the knowledge management platform or TRI, and may even come on board later, depending on how the out-scaling works.

- The project concept brings innovative and additional solutions that will enable restoration work with communities. But the description falls short about how it will address the root causes of degradation that still exist. It seems that only with little money, capacity building, technology and awareness, it will solve the problem. A better link to the problem to be solved (including a link to the causes and drivers of degradation (pressure on natural resources, poverty, climate change?) and how this project will work in this context would be welcome.

01/28/2021: Has been adequately addressed.

Cleared

Agency Response

? **Selection of Cameroon and Kenya** ? The Platform will initially be linked to The Restoration Initiative (TRI) GEF-6 program to allow for use of TRI infrastructure and networks for communications and knowledge sharing, capacity building, and enhanced outcomes at reduced cost. Platform activities will be piloted in two partnering TRI countries, Cameroon and Kenya, whose selection was informed by a number of factors including: (1) Bonn Challenge commitments and strong alignment of national objectives on restoration, rural development and poverty alleviation, climate mitigation and adaptation, and other restoration co-benefits with Platform objectives; (2) diversity of landscapes and contexts afforded by East and West African experiences; (3) existing IUCN and Bioversity International programs of work, offices and infrastructure in both Cameroon and Kenya; (4) local Kenyan technology expertise to potentially support the mobile application, blockchain software and tech support components; (5) availability of Restoration Opportunity Assessment Methodology (ROAM) assessments at national and sub-national scales, identifying priority restoration opportunities and interventions; (6) availability of Species Threat Abatement and Recovery (STAR) assessments,

including detailed, high-resolution geospatial analyses of landscapes and degradation and showing high priority areas and other information important for conservation of threatened species; and (7) size of the Project budget allowing for participation of 2 pilot countries. Additional countries and landscapes may be added at a subsequent date pending the success of the Platform, including work to mobilize crowd-funding of Platform-supported restoration. [Above text added to project summary at top.]

Additional notes on Cameroon: Cameroon has pledged to restore more degraded lands (12,062,800 hectares = 25.52% of the country areas) than any other countries from the Central African subregion. The country has extremely diverse ecosystems ranging from the tropical rainforest in the South and the East (Congo Basin Forest) to the Semi-arid zone in the North (Savannah, pastures), to the mountainous zones (Afromontane belt reaching 3,000 m altitude) and the coastal ecosystems (mangroves) in the West.

Cameroon is one of the critical biodiversity hotspots in the World and such rich diversity are threatened by deforestation (driven by unsustainable timber extraction and illegal logging, commodity crops such as cacao, palm oil, rubber, cotton), mining, climate changes etc. One can argue that Cameroonian ecosystems are 'representative' of the variety of ecosystems found in Sub Saharan Africa. Thus, we can learn a lot from piloting this project in Cameroon and the results can be replicated elsewhere.

? **Stronger linkages to drivers of degradation** - An additional paragraph describing how the project's approach and technology work to address some of the underlying drivers of land degradation ? in particular, improving and expanding access to the restoration marketplace to shift the incentives governing land use towards restoration ? has been added to the section on root causes and barriers that need to be addressed.

2. Is the baseline scenario or any associated baseline projects appropriately described?

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Not fully.

- Is the network coverage in the targeted areas sufficient to allow the use of such technologies at enough scale? I understand the data will be stored in the phones to be uploaded later in the Platform but I wonder whether the access to the Platform can be an issue anyway for many of the restoration Partners or direct beneficiaries.

- Please provide more detail about which existing low cost technology allows generate geo-spatial coordinates within a 3 meter circular perimeter of accuracy. Can you provide names of the technology? Do we already have experience on that?

- More information should be provided about the existing mobile banking systems, crowdfunding experiences and block-chain technology, explaining how it works and what these recent developments could bring to this project in particular.

•- Kenya is well-known to be one of the top-two countries in Africa, with South Africa, for the deployment of mobile banking over the last 12 years. The selection of the M-

PESA platform is a good choice, as it was the pioneer in Kenya. The situation is less known in Cameroon, and we are not sure about the level of deployment of MPESA in Cameroon. What is the level of mobile banking in the country and the considered regions (Waza, Mbalmayo, Douala-Edea)?

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- Tree planting monitoring apps have become more and more popular in a recent period and used by various NGOs in Africa (Madagascar, Senegal). I understand that IUCN and Bioversity International have initiated a discussion with SUSTAINIFI. It would be important to make a rapid review of existing apps and tools to anticipate potential problems and limitations (i.e also in the PPG).

- There are other projects to include in the baseline in Cameroon: there are some IFAD and AF projects in the same areas (at least in the North, around Waza), supporting the development of tree nurseries.

01/28/2021: Has been adequately addressed.

Cleared

Agency Response

? **Mobile network coverage and mobile payment providers in Cameroon and Kenya** - There is a high mobile phone penetration rate in Cameroon, which rose from 12% in 2005 to 83% in 2016 . The country's three main mobile networks operators ? Orange, MTN, Camtel ? also have very popular mobile banking systems, which are increasingly used not only to transfer funds but also to make payments at supermarkets, restaurants, and to purchase tickets (train, taxi, etc.) . Even higher rates of mobile network coverage are found throughout Kenya . A determination of the most suitable cellphone service network(s) and money transfer service(s) to be utilized in Cameroon and Kenya for this project will be made in the PPG-stage alongside selection of suitable landscapes and partner communities.

? **Accuracy of mobile-based location determination using GPS** ? The accuracy of smartphones in determining spatial location is dependent upon a number of factors including accuracy of the broadcast GPS signal (including the geometry of the GPS satellite network at the time of GPS signal broadcasting), as well as local factors including signal blockage, atmospheric conditions, and receiver design features and quality . According to a 2020 US government report, ??with current (2018) Signal-in-Space (SIS) accuracy, well-designed GPS receivers have been achieving horizontal accuracy of 3 meters or better and vertical accuracy of 5 meters or better 95% of the time.? However, as the assessment indicates, the quality of the embedded GPS receiver is a factor in determining the accuracy of the positioning calculation. A real-world 2018 study by the UN Refugee Agency that tested the accuracy of 7 commonly-used mobile phones found that observed errors ranged from less than 1m to a maximum of 10 m . So-

called dual-frequency mobile smartphones with the capacity to measure two satellite GPS frequencies simultaneously are coming on the market and promise to provide accuracy within 30 cm . Refurbished phones with this capacity are around \$250 USD and higher . It should be noted that accuracy within 3m or less is likely not needed for the purposes of the Platform, as uploaded geo-referenced photos will be cross-checked with additional information including registration of Restoration partners, delivery and/or pick up of tree seedlings, and restoration sites. [Above clarification added to proposal in footnote under Output 1.1].

? **Additional information on crowdfunding platforms and experiences using blockchain technology** ? Additional information on crowdfunding platforms and experiences, the use of blockchain technology in crowdfunding and how the integration of the two approaches support Platform goals is provided in the Baseline section and under Component 4. As noted in the revised/enhanced proposal, the blockchain technology will serve to build and ensure trust between crowdsourced investors and investees that crowdsourced funds are utilized in the manner as advertised and promised. This is a key challenge to successful crowdsourcing, and even more so in this case where investors will not see a financial return on their investment, are separated by large physical and cultural differences, and do not know each other. Moreover, the blockchain will allow for enhanced learning and evaluation, including by sharing information with the wider restoration research community. Lastly, it should be noted that the Platform does not seek to compete with existing crowdsource funding platforms ? rather the Platform will seek to collaborate and partner with other existing crowdsource platforms and partners including TerraMatch, the Priceless Planet Coalition, Ecosia, and others, to bring the Platform-support restoration investment opportunities to as wide an audience of potentially aligned investors as possible.

? **Baseline information on tree nursery capacity in Cameroon and Kenya** added to the proposal under the section on baseline scenario, and also under Output 2.3 describing work to establish and/or strengthen tree nursery(s) in each target landscape. While capacity is higher in Kenya, in both countries, the capacity of tree nurseries to provide high-quality seedlings of suitable species and genetic stock is limited and in need of strengthening.

? **Selection of suitable mobile application and/or developer for the Platform mobile application** ? IUCN has had some preliminary discussions with Sustainifi about the suitability of their platform and application to serve as the mobile application for this project. Bioversity International has also developed the SeedIT application referenced in the Baseline scenario and that will be enhanced and utilized for work supporting upstream strengthening of the restoration value chain of species selection, seed sourcing and genetic diversity, and seedling propagation and supply. The SeedIT application can potentially serve as a basis for the Platform mobile application with some further enhancements. There is also the Openforis (www.openforis.org) suite of open-source tools that can potentially be utilized. Whichever application and platform is selected, it will need to be enhanced with the blockchain technology described herein, and tailored somewhat to meet the particular needs of this project, including ease of use, reliability, security, front-end dashboard and back-end capabilities, and cost-effectiveness including

any costs for maintaining and using the application going forward. Selection of a suitable platform and/or developer for the Platform mobile application will be accomplished during the PPG-stage of the project, using the above criteria and open procurement following IUCN rules and procedures.

3. Does the proposed alternative scenario describe the expected outcomes and components of the project/program?

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Yes. The alternative scenario is well-described in these 3 paragraphs (pasted below), which can may be further highlighted and the innovative aspect of the project concept brought to the fore, so that the reader immediately understands what is new and groundbreaking.

"To address the above identified gaps for incentivizing, facilitating, mobilizing investment in, and supporting smallholder- and community-led restoration, a Restoration Challenge Grant Platform for Smallholders and Communities, with Blockchain-Enabled Crowdfunding will be established and operationalized. The Platform will utilize mobile cellular technology to provide small grants/payments to smallholder-, community-, and school-led restoration work ? principally tree-planting ? matched by co-investment (in-kind and/or cash). A second phase of the Platform will utilize blockchain technology and a public-facing web platform to facilitate crowdfunding of the Platform and financial sustainability."

"The Platform will initially be linked to The Restoration Initiative (TRI) GEF-6 programme to allow for use of TRI infrastructure for communications, engagement, capacity building, and enhanced outcomes at reduced cost. Links to the TRI programme have informed the initial selection of partnering countries and landscapes, and additional TRI countries may engage with the Platform going forward. Upon successful development and implementation of the Platform including blockchain-enabled crowdfunding, the Platform will function as a freestanding initiative."

"A key objective for the Platform will be to pilot, enhance knowledge and best practices on, and subsequently scale up successful approaches for engaging, incentivizing, mobilizing investment in, and supporting smallholders and rural community members in restoration. A range of engagement approaches and selection of a diverse group of landscapes will allow for cross comparison and learning to inform restoration initiatives going forward. Capture of lessons and sharing of best practices and approaches, and partnering with other global and regional initiatives and platforms supporting the restoration agenda including the Trillion Trees Initiative and UN Decade on Ecosystem Restoration will be supported through a dedicated workstream (Component 3) and knowledge management strategy."

01/28/2021: Has been adequately addressed.

Cleared

Agency Response

Text has been amended in several areas including summary at the top, the alternative scenario, and in the Component descriptions. Changes and additions to the paragraphs cited are shown below:

To address the above identified gaps for incentivizing, facilitating, mobilizing investment in, and supporting smallholder- and community-led restoration, a Restoration Challenge Grant Platform for Smallholders and Communities, with Blockchain-Enabled Crowdfunding will be established and operationalized. The Platform will utilize mobile cellular technology and payment transfer services to provide small grants/payments to smallholder-, community-, and school-led restoration work principally tree-planting matched by co-investment (in-kind and/or cash). Another key innovative focus of the Platform will be the integration of blockchain technology throughout the restoration value chain to provide transparency, build trust, facilitate real-time monitoring and evaluation and verification, and support mobilization of funding for restoration. From appropriate species selection, seed sourcing and seedling propagation, to tree planting and maintenance and transfer of payments, each transaction will be marked by a unique, traceable, unchangeable and verifiable blockchain. A second phase of the Platform will utilize a public-facing web platform and partnerships with other tree planting and restoration investment matching platforms to facilitate crowdfunding of Platform-supported restoration and financial sustainability, drawing upon the blockchain technology and ledger for security and transparency and trustworthiness of crowdfunded transactions.

The Platform will initially be linked to The Restoration Initiative (TRI) GEF-6 programme to allow for use of TRI infrastructure for communications, engagement, capacity building, and enhanced outcomes at reduced cost. Upon successful development and implementation of the Platform including blockchain-enabled crowdfunding, the Platform will function as a freestanding initiative.

A key objective for the Platform will be to pilot, enhance knowledge and best practices on, and subsequently scale up successful approaches and technology - including use of blockchain technology, crowdfunding, mobile payments, and mobile-based monitoring of restoration - for engaging, incentivizing, mobilizing investment in, and supporting smallholders and rural community members in restoration. A range of engagement approaches and selection of a diverse group of landscapes will allow for cross comparison and learning to inform restoration initiatives going forward. Capture of lessons and sharing of best practices and approaches, and partnering with other global and regional initiatives and platforms supporting the restoration agenda including the Trillion Trees Initiative and UN Decade on Ecosystem Restoration will be supported

through a dedicated workstream and knowledge management and partnership strategy (Components 3 and 4)?

4. Is the project/program aligned with focal area and/or Impact Program strategies?

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Yes.

Agency Response

5. Is the incremental/additional cost reasoning properly described as per the Guidelines provided in GEF/C.31/12?

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Not fully.

Please focus on the innovative approach in the incremental reasoning, some points that come later in the innovation section can be moved up to highlight that the GEF is making this investment to catalyze innovation.

01/28/2021: Has been adequately addressed.

Cleared

Agency Response ? The innovative elements and approach are now more clearly described in the section on incremental/additional cost reasoning.

6. Are the project?s/program?s indicative targeted contributions to global environmental benefits (measured through core indicators) reasonable and achievable? Or for adaptation benefits?

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Yes, however, please consider providing a conservative estimate for CCM-benefits (based on simple tier one estimate ha x average CO2 benefit) so that we don't have a XX in the CCM estimate.

01/28/2021: Has been entered into core indicator table.

Cleared

Agency Response ? Using tons/ha figures from the TRI restoration projects in Cameroon and Kenya Arid and Semi-Arid lands, we have a rough estimate for direct emissions reductions of 64 tCO₂eq mitigation /ha and 94 tCO₂eq mitigation / ha respectively. If we estimate that the 5,000 ha under restoration target will be divided

equally between Kenya and Cameroon, we can conservatively estimate that the project will result in **395,749 tCO₂e direct mitigation**.

7. Is there potential for innovation, sustainability and scaling up in this project?

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Yes, there is high potential. This potential, especially with regard to block-chain could be further elaborated in this section. In addition, there is some clarification requested (here or in more appropriate places in the PIF):

- Why are the selected block-chain elements considered the most appropriate in the context of the project and not others, e.g. the introduction of virtual token money?
- Where or how will the Platform be anchored to ensure maintenance and continuity?
- Terra Match is said to share similar goals, which sounds like duplicating efforts? The question may arise what will be the added value of the Platform created by this project?
- If we are thinking about scaling up, how can this work in those countries which do not have a low-cost transfer payment system such as M-PESA?

01/28/2021: Has been adequately addressed.

Cleared

Agency Response

? **Rational for blockchain and approach and avoidance of virtual/cryptocurrency**

? As noted in the proposal, integration of the blockchain technology and approach will facilitate enhanced monitoring, evaluation, verification, transparency, security, and the all-important building of trust that underlies successful crowdfunding. For these reasons, the integration of blockchain and crowdfunding is becoming more common, as noted in the proposal under Component 4. In addition, there is a common misconception that Bitcoin and other cryptocurrencies and blockchain are one and the same, however this is not the case. The blockchain is an underlying technology behind cryptocurrencies, however blockchain has many uses independent of cryptocurrencies. Cryptocurrencies and virtual/token currencies introduce an additional layer of complexity and risk to projects, and in the case of this project, was deemed to be both unneeded and unsuitable in achieving project goals and outcomes. One reason for this is the use of a cryptocurrency and/virtual token potentially lowers trust among crowdsourced investors and investees, which is a cross purposes with the project objectives and approach.

? **Ensuring maintenance and continuity of the Platform** ? Pending success of the Platform and crowdfunding elements, the Platform will be largely or completely self-

financing, requiring little to no additional public funding. IUCN and Bioversity International intend to maintain engagement with the Platform and foresee the Platform as a key tool that can be scaled up to support restoration initiatives and projects both internal and external to our organization. A determination of the best institutional arrangement for operating and maintaining the Platform following project closure will be made in at the end of Year 2 of the project.

? **Partnership with TerraMatch** ? as noted in the proposal, the Platform will seek to partner with TerraMatch and other platforms and partners under Components 3 and 4 of the project, to bring the Platform-supported restoration investment opportunities to as wide an audience of potentially aligned investors as possible. TerraMatch is principally an aggregating platform where project developers can advertise tree-planting and restoration opportunities. It does duplicate the work of the Platform that is largely focused on the on-the-ground development activities needed to expand the restoration marketplace to rural communities and smallholders, and that does so in a way that ensures restoration is done using best practices, with benefits flowing to local communities, and that provides confidence to investors that investments will be utilized as advertised and promised. The pace and scale at which restoration is presently occurring is a fraction of what is needed to address global challenges. A large part of that is due to a shortage of bankable, high-quality restoration projects. This proposal is piloting tools and approaches for addressing these bottlenecks that if successful, can be replicated, scaled up, and incorporated into other restoration initiatives.

? **Scaling up and availability of low-cost payment transfer systems** ? As noted in the baseline section, the market for low-cost mobile funds transfer services is booming across Africa and other parts of the world. M-Pesa is presently the most successful mobile-phone based financial service in the developing world, although it is by no means the only provider. According to M-Pesa, over 41.5 million people access the service regularly, recording some 12 billion transactions in 2019 alone. Along with Kenya, the service is now available in Tanzania, Mozambique, DRC Lesotho, Ghana, Egypt, Afghanistan and South Africa. Other low-cost funds transfer service providers that are, or are becoming established across Africa and other parts of the developing world include Orange, MTN, and Camtel network providers in Cameroon. Globally, Sub-Saharan Africa is the fastest-growing mobile market in the world, and the market for mobile funds transfer providers is expected to continue to grow in number and size. Considering these developments, and the fact that the Platform is not dependent upon use of a particular money transfer service provider (the payment transfer mechanism will likely not be directly integrated into the Platform mobile application, rather recorded simultaneously), the prospects for scaling up the Platform and approach are very favorable.

Project/Program Map and Coordinates

Is there a preliminary geo-reference to the project?s/program?s intended location?

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Yes.

Agency Response

Stakeholders

Does the PIF/PFD include indicative information on Stakeholders engagement to date? If not, is the justification provided appropriate? Does the PIF/PFD include information about the proposed means of future engagement?

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Not fully.

- Please provide more information on the stakeholder consultations that were actually conducted so far. Please include people consulted to develop the concept (e.g. Plastic Bank, Block-chain workshop participants, etc.)
- Will the project engage local level NGOs and Farmers cooperatives as a support network to engage and support the smallholders? Should there be a national level anchor that is tied to the country and not necessarily only the IUCN or Bioversity International?
- About the comparative advantage of Bioversity International: It is very good that the proposed project builds upon existing partnerships with local partners in Kenya and Cameroon. Local partners will be key to make the project credible and acceptable by local communities. However, more information on these partnerships would be appreciated.
- It would be useful to engage potential investors during the design phase to get a sense of their preferences for the crowd-sourcing platform.

01/28/2021: Has not been fully addressed:

While you marked all the boxes indicating that civil society organizations and indigenous peoples and local communities were consulted, this isn't clear from the text description and below response, as these refer only to the consultations with government entities and private sector. For this project, where community engagement is at the core of its objectives, outputs and activities and community buy-in of the project early on (i.e. from the identification phase) is important. Please clarify what has been done in this regard.

03/03/2021:

Has been adequately addressed as per response below and in the PIF text.

Cleared

Agency Response

? **Stakeholder consultations** ? additional information on external experts and country representatives consulted in the development of this project provided in section 2, Stakeholders (pages 25-26)

? **Partnerships with Cameroon and Kenya:** Bioversity International's Regional Office for Africa is in Nairobi and the sub regional Office for Central Africa is in Yaounde, Cameroon. Bioversity has existing partnerships with both Government institutions (including Ministry of Forests/Agriculture/Environment/Research, etc)) on landscape restoration issues as well as collaborations with a range of NGOs, communities and/or communal forests managers doing restorations activities in the field. Bioversity has staff based in both countries implementing activities. Bioversity is presently developing the Diversity for Restoration Tool (D4R) for Cameroon with 300 native tree species identified. IUCN's office for Eastern and Southern Africa is in Nairobi and IUCN's office for West Africa is in Younde Cameroon. As with Bioversity, IUCN has extensive programs and relationships with Kenyan and Cameroon government, NGO, and community partners on forest landscape restoration.

? **Engagement with local NGOs, Farmer cooperatives, and National government partners** ? Both IUCN and Bioversity International have ongoing programs of work, including those focused on restoration and restoration supply chains, as well as offices in both Kenya and Cameroon. Bioversity is also working in Cameroon with several NGOs to pilot use of the SeedIT application. The Platform has been endorsed by both the government of Cameroon and Kenya. The Platform will seek to partner with government partners, as well as with local NGOs and Farmer cooperatives as appropriate and helpful to both country and project objectives. This includes work to strengthen the seed supply chain and tree nurseries in both countries, building on existing work by Bioversity, IUCN, and TRI partners in both countries. Identification of additional local partners will be made during the PPG stage alongside selection of appropriate landscapes and partner communities.

? **Engaging potential investors during the design phase to better understand investor preferences** ? Agree. As noted, Bioversity is already in discussion with Ecosia about potentially partnering to mobilize funding for Platform-supported restoration. Additional outreach to sites and potential partners, including TerraMatch, the Priceless Plante Coalition, as well as other crowdfunding platforms will occur in the PPG stage.

2/23/2021: Consultation with CSOs ? additional details on preliminary consultations with CSOs on the feasibility, interest, and suitability of partnering with the Platform in select landscapes, to be followed up and examined more closely in the PPG phase, has been added to the PIF in the Stakeholder consultation section.

Gender Equality and Women's Empowerment

Is the articulation of gender context and indicative information on the importance and need to promote gender equality and the empowerment of women, adequate?

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Not fully.

- Some information on the project specific context as it relates to gender should be included at the PIF stage. For example, the opportunity may be explored to make restoration payments preferably to women, etc.

01/28/2021: Has been adequately addressed.

Cleared

Agency Response ? **Project specific action points on Gender ?** The proposal includes the suggested actions. As noted in the proposal, ?A gender action plan will be developed in the PPG stage of the Project, including means for ensuring gender equality and equity in partnering with local communities and in the sharing and distribution of local benefits from Platform-supported work. **This may include, for example, having female heads of households responsible for receiving and managing Platform-supported restoration and maintenance payments,** and, where feasible, ensuring that a balanced number of Community entrepreneurs are male and female.?

Private Sector Engagement

Is the case made for private sector engagement consistent with the proposed approach?

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Clarification question:

- Are there more concrete plans/*i*ideas which private sector players will be involved?
- Are there plans to target the private sector (national and international) as sources for the crowdfunding?

01/28/2021: Has been adequately addressed.

Cleared

Agency Response ? **Engagement of the private sector ?** Private sector engagement is considered a key element of the proposal. Key private sector partners include the Community Entrepreneurs, Restoration partners, and smallholders themselves who will do the work of engaging and restoration planting and maintenance. Other private sector partners include tree nursery and seed supply actors (though in Kenya, public-supported tree nurseries may be engaged depending upon capacity), and crowdfunders as well as other potential private sector investors including Ecosia and Mastercards Priceless Planet Coalition. The crowdfunding engagement and restoration opportunities will be presented and made available to all interested investors, whether they be national or international. [Note ? some additional clarification as above added to the proposal under Private Sector Engagement)

Risks to Achieving Project Objectives

Does the project/program consider potential major risks, including the consequences of climate change, that might prevent the project objectives from being achieved or may be resulting from project/program implementation, and propose measures that address these risks to be further developed during the project design?

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Yes.

Agency Response

Coordination

Is the institutional arrangement for project/program coordination including management, monitoring and evaluation outlined? Is there a description of possible coordination with relevant GEF-financed projects/programs and other bilateral/multilateral initiatives in the project/program area?

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Clarification questions (see also under stakeholders):

- Will the project engage local level NGOs and Farmers cooperatives as a support network to engage and support the smallholders? Should there be a national level anchor that is tied to the country and not necessarily only the IUCN or Bioversity International?

- About the comparative advantage of Bioversity International: It is very good that the proposed project builds upon existing partnerships with local partners in Kenya and Cameroon. Local partners will be key to make the project credible and acceptable by

local communities. However, more information on these partnerships would be appreciated.

01/28/2021: Has been adequately addressed.

Cleared

Agency Response

? **Engagement with local NGOs, Farmer cooperatives, and National government partners** ?

Both IUCN and Bioversity International have ongoing programs of work, including those focused on restoration and restoration supply chains, as well as offices in both Kenya and Cameroon. Bioversity is also working in Cameroon with __NGOs to pilot use of the SeedIT application. The Platform has been endorsed by both the government of Cameroon and Kenya. The Platform will seek to partner with government partners, as well as with local NGOs and Farmer cooperatives as appropriate and helpful to both country and project objectives. This includes work to strengthen the seed supply chain and tree nurseries in both countries, building on existing work by Bioversity, IUCN, and TRI partners in both countries. Identification of additional local partners will be made during the PPG stage alongside selection of appropriate landscapes and partner communities.

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Consistency with National Priorities

Has the project/program cited alignment with any of the recipient country's national strategies and plans or reports and assessments under relevant conventions?

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Yes.

Agency Response
Knowledge Management

Is the proposed ?knowledge management (KM) approach? in line with GEF requirements to foster learning and sharing from relevant projects/programs, initiatives and evaluations; and contribute to the project?s/program?s overall impact and sustainability?

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Yes.

Agency Response
Environmental and Social Safeguard (ESS)

Are environmental and social risks, impacts and management measures adequately documented at this stage and consistent with requirements set out in SD/PL/03?

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Yes.

Agency Response

Part III ? Country Endorsements

Has the project/program been endorsed by the country?s GEF Operational Focal Point and has the name and position been checked against the GEF data base?

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: Yes. LoEs are provided by Kenya and Cameroon as pilot field activities of this global project will take place in those two countries.

Cleared

Agency Response
Termsheet, reflow table and agency capacity in NGI Projects

Does the project provide sufficient detail in Annex A (indicative termsheet) to take a decision on the following selection criteria: co-financing ratios, financial terms and

conditions, and financial additionality? If not, please provide comments. Does the project provide a detailed reflow table in Annex B to assess the project capacity of generating reflows? If not, please provide comments. After reading the questionnaire in Annex C, is the Partner Agency eligible to administer concessional finance? If not, please provide comments.

Secretariat Comment at PIF/Work Program Inclusion

n/a

Agency Response

GEFSEC DECISION

RECOMMENDATION

Is the PIF/PFD recommended for technical clearance? Is the PPG (if requested) being recommended for clearance?

Secretariat Comment at PIF/Work Program Inclusion

08/27/2020: No. Please address comments made in this review sheet. Furthermore, please also consult STAP for an informal screen of the project concept and take STAP comments into consideration.

01/28/2021: No. Four outstanding comments to be addressed in Tables C, D, E and on stakeholder engagement.

03/03/2012: Yes. All comments have been addressed. Program Manager recommends PIF for CEO approval.

ADDITIONAL COMMENTS

Additional recommendations to be considered by Agency at the time of CEO endorsement/approval.

Secretariat Comment at PIF/Work Program Inclusion

Review Dates

PIF Review

Agency Response

PIF Review Agency Response

First Review	8/27/2020
Additional Review (as necessary)	1/28/2021
Additional Review (as necessary)	3/3/2021
Additional Review (as necessary)	
Additional Review (as necessary)	

PIF Recommendation to CEO

Brief reasoning for recommendations to CEO for PIF Approval

The Restoration Challenge Grant Platform for Smallholders and Communities, with Blockchain-Enabled Crowdfunding will facilitate and support enhanced smallholder and rural community member engagement and investment in restoration. The Platform will utilize mobile cellular technology and payment transfer services to provide small grants/payments for smallholder-, community-, and school-led restoration work ? principally tree-planting ? matched by co-investment (in-kind and/or cash). Cellular technology will allow for efficient and effective verification of work and transfer of payments. Another key innovative focus of the Platform will be the integration of blockchain technology throughout the restoration value chain to provide transparency, build trust, facilitate real-time monitoring, evaluation and verification, and support mobilization of funding for restoration. From appropriate species selection, seed sourcing and seedling propagation, to tree planting and maintenance and transfer of payments, each transaction will be marked by a unique, traceable, unchangeable and verifiable blockchain. A second phase of the Platform will utilize a public-facing web platform and partnerships with other tree planting and restoration investment matching platforms to facilitate crowdfunding of Platform-supported restoration and financial sustainability, drawing upon the blockchain technology and ledger for security and transparency and trustworthiness of crowdfunded transactions. A range of engagement approaches and selection of a diverse group of landscapes will allow for cross comparison and learning to inform restoration initiatives going forward.

The MSP design has benefitted from STAP advise and interaction with a group of experts convened by STAP in the context of the workshop on blockchain technologies.

Further, the project has duly taken risks and opportunities of the COVID-19 pandemic into account. Investment in restoration on the ground is in fact a way to create

opportunities for local communities and may be combined with local and national governments efforts of building back better.