Facilitating Finance for Biodiversity in Agriculture through Biotokens

Response to RFP Queries Version 2

Date 12.06.2025

This document serves to respond to queries received from potential bidders within the specified period for queries. Note that questions are copied below exactly as received.

QUERY	RESPONSE
1. Will the detailed PSIR framework documentation, including the complete list of "locally relevant biodiversity indicators", their definitions, data types, units, expected input methods (e.g., numerical, categorical), and recommended collection frequencies, be provided to the selected technology provider?	Yes, the detailed framework will be provided
2. Regarding the "maximum of twenty (20) biodiversity indicators" selectable by farmers, are these chosen from a predefined, larger pool of indicators? If so, what is the size of this pool?	The maximum limit will be 20 indicators for the purpose of this pilot
3. Could you clarify if the "maximum of twenty (20) farmers" refers to the limit for the initial pilot phase only, or the overall designed capacity of the prototype? What are the scalability expectations for farmer numbers beyond the pilot?	20 farmers for the pilot phase. The solution architecture should be scalable to accommodate future growth; however, this is not yet defined.

4. The scope of "optional integrations" and the specifics of "field verification visits" and "established thresholds" are unclear and impact the development effort and system design.	Further details will be provided corresponding to the intended milestone which addresses “Detailed Requirements/User Stories Sign-off” (refer to page 8 of the RFP for Key Milestones)
5. For "optional integration of enabling technologies" (IoT, sensors, drones): Is the selected vendor expected to develop and implement these integrations within this project’s scope, or to design the platform with APIs/capabilities for future integrations? If specific technologies are envisioned, kindly provide details?	These are optional and are not the responsibility of the solution provider at this point. Technologies will center around farmers self-reporting, including potential optional technologies such as soil-testing kits.
6. Please elaborate on the workflow for "field verification visits". Who is responsible for conducting these visits and entering the verification data into the system? How does this verified data interact with farmer-reported data (e.g., override, flag)?	The Cropper Foundation or other project team partners will be responsible for field visits. The solution provider would not be expected to conduct these. It is expected the solution will allow for prompt / notification for farmers to recheck their entries when data is flagged
7. What are the "established thresholds" for data verification? Will these be provided by TCF, and are they static or dynamic? How will they be managed and updated within the system?	These will be shared with the solution provider as per Key Milestone “Inception Meeting & Indicator Framework introduction”. (refer to page 8 of the RFP for Key Milestones) This will be static for the purposes of this pilot
8. Does TCF have a preferred "private blockchain" technology (e.g., Hyperledger Fabric, private Ethereum, Corda), or is the vendor expected to propose a suitable platform? What are the expectations for node hosting, management, and maintenance?	There is no preferred technology, and the solution provided will be responsible for proposing and justifying their selection. The solution provider will be responsible for infrastructure considerations required to operate the solution, such as node hosting, management, and maintenance.

9. Are there any specific technical standards envisioned for the "non-transferable, non-speculative 'Biotokens'"?	Additional guarantees will be provided corresponding to the intended milestone which addresses “Detailed Requirements/User Stories Sign-off” (refer to page 8 of the RFP for Key Milestones)
10. Regarding "secure digital wallets" for Financial Institutions: Is the development of these wallets part of the project scope, or is integration with existing third-party wallet solutions anticipated?	Secure digital wallet is expected to be part of the solution to be developed.
11. Page 6, "Security and Privacy" states "only anonymized performance metrics recorded on the blockchain". Please provide more specific guidance on which data elements are to be stored on-chain versus off-chain to ensure farmer privacy while maintaining auditability? What metadata associated with Biotokens will be on-chain?	Data proposed to be stored off-chain and data proposed to be stored on-chain will be reviewed and confirmed at the “Detailed Requirements/User Stories Sign-off” (refer to page 8 of the RFP for Key Milestones)
12. Will TCF provide the detailed algorithms, rules, and calculation logic for the "Pressure proxy score," "biodiversity performance score," and determining "Eligibility for token awards"? Or is the definition and development of this logic part of the vendor's scope?	Information to become apparent at the “Detailed Requirements/User Stories Sign-off” (refer to page 8 of the RFP for Key Milestones)
13. Where is the "Calculation logic" for indicators and scores expected to be executed (e.g., mobile app, backend server, or blockchain smart contracts)?	Solution providers are expected to propose the most suitable environment for execution.
14. If an administrative user edits farmer-submitted data, how should this	The entries into the blockchain will only occur after the data verification step has

modification be reflected, particularly if the original data might have triggered or been part of a blockchain transaction (or Biotoken issuance)? Is the original entry preserved, and will there be an audit trail for such edits visible to relevant parties, including the farmer?	occurred.
15. Aside from the requirement for a private blockchain, are there any preferred technologies or existing infrastructure considerations for the mobile application development (e.g., native iOS/Android, cross-platform framework), backend development, or database systems?	The project team is open to suggestions as there are no preferences at this point
16. What is the estimated user count for the following: • The Cropper Foundation (TCF) - Mobile Application & Web Application, administrative users • Pinaka Consulting - Mobile Application & Web Application, administrative users • Farmers – Mobile Application users • Financial Institutions (FI) Users – Web Application users	TCF = 5 Pinaka = 5 Farmers = 20 FI = 5
17. Are there preferred or prohibited blockchain frameworks/protocols (e.g., Hyperledger Fabric, Ethereum)?	No, see response above for Query #8
18. Can you share the exact calculation logic or threshold values that will trigger Biotoken issuance under the PSIR framework?	Information to become apparent at the "Detailed Requirements/User Stories Sign-off" (refer to page 8 of the RFP for Key Milestones)
19. Is there an expected maximum data payload or sync frequency for offline mobile captures?	Offline data should be held for a maximum of 1 month but with prompts / notifications to the farmers and to sync
20. Is the blockchain system expected to	There is no preferred methodology, and the

be a separate backend service with API integration, or should blockchain logic be embedded directly within the app?	solution provided will be responsible for proposing and justifying their selection
21. What blockchain platform or technology is preferred or mandated? Hyperledger Fabric, Quorum, Ethereum (private), or others?	There is no preferred technology, and the solution provided will be responsible for proposing and justifying their selection. The solution provider will be responsible for infrastructure considerations required to operate the solution, such as node hosting, management, and maintenance.
22. What are the data privacy requirements? Which data must remain private? How is sensitive farm data protected while ensuring transparency and auditability?	Data proposed to be stored off-chain and data proposed to be stored on-chain will be reviewed and confirmed at the "Detailed Requirements/User Stories Sign-off" (refer to page 8 of the RFP for Key Milestones)
23. How will the app communicate with the blockchain? Through REST APIs, SDKs, or direct blockchain node interactions?	There is no preferred methodology, and the solution provided will be responsible for proposing and justifying their selection.
24. What are the performance expectations regarding transaction speed and volume? How many transactions (data entries, token minting, burning) are anticipated daily/weekly?	Performance metrics have not yet been defined. However, given that the initial target is 20 farmers with monthly biodiversity indicators we anticipate less than 1000 indicators to be processed monthly by the system.
. 25. What specific biodiversity indicators need to be captured? Habitat quality, soil health, water quality, species counts, etc.	The detailed framework listing the specific biodiversity indicators will be provided subsequently
26. What are the verification workflows? Will verification be automated or manual (by field inspectors)? How is verification triggered and recorded?	The Cropper Foundation or other project team partners will be responsible for field visits. The solution provider would not be expected to conduct these. It is expected the solution will allow for prompt / notification for farmers to recheck their entries when

	data is flagged
27. What are the criteria for minting 'Biotokens'? Are there thresholds or scoring systems? How is success defined?	Information to become apparent at the "Detailed Requirements/User Stories Sign-off" (refer to page 8 of the RFP for Key Milestones)
28. How will token redemption work? Will tokens be burned immediately upon redemption? Are there specific rules for incentives (interest reduction, cashback)?	Information to become apparent at the "Detailed Requirements/User Stories Sign-off" (refer to page 8 of the RFP for Key Milestones)
29. Are there specific security protocols or standards required for app and blockchain security? e.g., encryption, multi-factor authentication, private key storage best practices.	Security is expected to be of paramount importance to this project and the application and blockchain should ensure that all sensitive data is encrypted, keys and other sensitive data is stored securely. Furthermore, robust authentication and authorization mechanisms must be implemented in the application and infrastructure.
30. What user roles and permissions are needed? Farmers, inspectors, app administrators, financial institution users, policymakers.	Information on user types are shared on pg. 5 RFP any further necessary details can be provided subsequently. It is expected that the application would provide role-based access control.
31. What are the onboarding and training requirements? How will users be trained to input data, verify outcomes, and manage wallets?	The solution provider is expected to expound on their approach towards Training and Documentation as indicated in Key Milestones section within the RFP pg. 8 There will be training sessions for all expected users, which the project team is expected to support.
32. What reporting and dashboard features are expected? Real-time monitoring, historical trends, verification status, token lifecycle tracking.	The solution provider will be responsible for proposing reporting and dashboard features which may be influenced further by the Key Milestone "Detailed Requirements/User Stories Sign-off".
33. How scalable should the system be? Expected number of farms, indicators, and data points over the next 3-5 years.	The initial number of farmers is planned to be 20 though the number of farmers and indicators could increase post-pilot. The system should be scalable to the extent

	proposed by the solution provider. Any scalability constraints should be enumerated.
34. What additional biodiversity indicators or data sources might be integrated in the future? Sensors, IoT devices, drones, external data feeds.	For "optional integration of enabling technologies" (IoT, sensors, drones) - these are optional and are not the responsibility of the solution provider at this point
35. Are there plans to connect this system with other eco-system markets or green finance platforms? How should integration be designed to support future connectivity?	The system should be designed with future integration in mind.
36. What legal or regulatory standards apply? Data protection laws, financial regulations, organic certification standards.	Solution providers are expected to cater to best practice as informed by prevailing legislation, standards and requirements for data protection within Trinidad and Tobago.
37. Are there specific audit or compliance requirements for blockchain records? For example, audit trails for government or third-party review.	Solution providers are expected to cater to best practice as informed by prevailing legislation, standards and requirements within Trinidad and Tobago
38. What is the expected timeline for design, prototyping, testing, and deployment? Are there phased milestones?	Please refer to the Key Milestones section of the RFP pg. 8 and the expectations of bidders detailed within.
39. What support and maintenance are expected post-deployment? Ongoing updates, security patches, user support.	Please refer to the Key Milestones section of the RFP pg. 8 and the expectations of bidders detailed within.