Request for Proposal: Development of a crop monitoring system using remote sensing and field data mapping

RFP n#: 2025-8-ID-CMRS
Location: Global
Start Date: 1-10-2025
End Date: 30-03-2026

Better Cotton key contact

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Impact & Fundraising Team

All applications must be submitted via this form.
You may submit questions to tender@bettercotton.org with the subject header RFP # 2025-8-ID-CMRS until 5th September 2025.

Questions, requests and applications sent after the deadline for queries (5th September 2025) will only be considered in exceptional circumstances. The deadline for submission of applications is 12th September 2025.

Submission Update:

We have changed how we are receiving bids. After submitting your details through the form, you will receive a separate email to upload your supporting documents to a secure platform.

AT THE END OF THIS DOCUMENT, THERE IS A QUESTION-AND-ANSWER SECTION WHICH YOU ARE ENCOURAGED TO GO THROUGH IN PREPARATION FOR SUBMITTING YOUR BIDS

Description

Better Cotton is the world's largest cotton sustainability programme. Our mission: to help cotton communities survive and thrive, while protecting and restoring the environment. In difficult times, we are meeting the challenge head on. Through our network of field-level partners we have provided training on more sustainable farming practices to more than 2.9 million cotton farmers in 26 countries. More than a fifth of the world's cotton is now grown under the Better Cotton Standard and our membership network includes more than 2,400 members.

More information about Better Cotton can be found on our website: www.bettercotton.org

Background

This work is part of a larger ISEAL funded project focusing on the Geospatial Information Technology for Outcome Verification (GIT4OV) as a means to pave the way for improved smallholder livelihoods. This work focuses on the integration of remote sensing and GIS technology to improve cotton farmers efficiency, productivity and sustainability by developing the algorithms for crop detection, crop monitoring and soil health monitoring.

Geospatial Information Technology (GIT) combines the principles of geography with advanced technology to collect, analyse and manage geographical data. The key components of GIT are geographic information system (GIS), Remote Sensing (RS), Global positioning system (GPS) and geospatial data. GIT is being used in various fields including agriculture and natural resource management. GIT is agriculture supports precision farming, crop monitoring, crop advisory and soil analysis for better natural resource management and conservation.

Remote Sensing is a modern-day requirement for agriculture and management practices. Remote sensing has its key implications in crop monitoring, precision agriculture, crop production/yield prediction, soil analysis and weather monitoring for informed decision making for the farmers regarding crop health, site specific fertiliser application, crop rotation and soil management, better planning for yield and market decisions and particularly about tracking weather patterns and predicting natural disasters allowing farmers to practice prevention and mitigation.

Better Cotton has conducted a detailed matrix review of remote sensing technologies in agriculture and GIS approaches that are being used in agriculture globally and have also documented the best practices and case studies from use of remote sensing and GIS applications in agriculture. The matrix review report recommended a hybrid approach for the Better Cotton that can integrate freely available Sentinel-2 imagery or commercial datasets for precise field boundary delineation, especially on fragmented small farms. The review recommendation also included the use of deep learning models to fine-tune through farmer-validated ground truthing via mobile tools such as ODK and introducing a centralised geospatial data warehouse on Azure and a Power BI dashboard to streamline monitoring of crop health, water use, and regenerative outcomes. The scaling should follow a pilot–scale–sustainability roadmap, culminating in a global open-source boundary repository to drive equitable digital agriculture. Based on the recommendations of the review, Better Cotton is looking for developing the crop monitoring system using remote sensing and field data.

Better Cotton distinguishes farms by size to adapt sustainability requirements. Small farms (up to 20 hectares) are typically family-managed with limited hired labour, focusing on basic record-keeping and participatory training. Medium farms (20-200 hectares) involve more structured operations, requiring formal management systems, enhanced documentation, and broader worker engagement. Large farms (>200 hectares) operate commercially with significant labour forces and mechanisation, demanding rigorous compliance with all Better Cotton Principles and Criteria, including integrated pest management, water stewardship, decent work, and biodiversity enhancement. Each category aligns with the Better Cotton Standard System, ensuring that practices are scaled appropriately to farm capacity while promoting continuous improvement. Criteria are adapted to reflect differences in decision-making, resource access, and workforce dynamics, enabling inclusive and measurable sustainability outcomes across all farm types.

A comprehensive remote sensing system must be useful for crops detection particularly cotton in the field with multi-temporal, openly available high-resolution, satellite imagery combined with ground-truthing protocols to ensure accuracy. It should support vegetation indices, canopy cover analysis, and phenological monitoring to detect crop health, stress, and yield potential. It must have integration with GIS platforms to enable spatial mapping and decision support. For rangelands and forests, biomass estimation and land cover classification are essential. The system must accommodate diverse crop cycles, local climatic conditions, and stakeholder needs, while

ensuring interoperability with existing agricultural databases and enabling scalable, real-time monitoring for sustainable land management.

Scope of Work & Deliverables

Better Cotton invites qualified consultants or consulting firms to submit proposals for the development of algorithms and integrated tools for crop detection and field data mapping. The scope includes:

1. Design a machine learning-based solution to automate the delineation of agricultural field boundaries using remote sensing imagery. It must be a functional algorithm capable of segmenting satellite imagery to generate polygonal representations of field boundaries by integration of models fine-tuned for smallholder's context compatible with geospatial platforms.

2. Designing algorithms and tools for land cover classification and biomass detection, land conversion over time, crop detection, crop health monitoring, agriculture practices validation (e.g. land levelling, ridge sowing, intercropping etc.) pest and disease detection, yield estimation, soil health monitoring (e.g. soil organic matter, soil nitrogen status, moisture contents etc.) weather conditions and farmer advisories.

3. Integrating remote sensing data with local agricultural practices, weather patterns, and government datasets.

4. Develop dynamic web-based system with graphical user interface (GUI) to access the algorithms and tools developed under scope 1, 2 and 3.

5. Delivering a training module on Web-GIS application use in the field.

6. Creating farmer-friendly guidelines for interpreting localised data and applying insights.

The consultant/firm will develop a robust crop monitoring system integrating remote sensing and field data mapping to enhance agricultural decision-making, outcome verification and sustainability outcomes. The consultant/firm will be designing system architecture, identifying appropriate satellite datasets and ground-truthing protocols, and establishing data validation mechanisms. The system will monitor crop growth/health, stress indicators, and yield forecasts across designated pilot regions (Pakistan, India, Mozambique). It must align with stakeholder needs, support real-time updates, and ensure interoperability with existing agricultural platforms. The consultant/firm will conduct stakeholder consultations, propose user-friendly visualisation tools, and prepare training materials for system adoption. Deliverables include a detailed implementation plan, technical manual, and a pilot-tested monitoring dashboard.

Regions/Countries: Pakistan, India, Mozambique and Australia, but scalable to other cotton growing regions/Better Cotton working location.

IT requirements:

- The newly developed system including the technology stack must be compatible with Better Cotton's existing IT systems (can be further discussed at inception stage).

- The newly developed system must be access based and must have user permissions/restriction like super admin, global login, country login to

access the specific country data only. The system must be capable of storing the farmers data in country specific locations to ensure data protection, security and compliance with legal requirements.

- The proposed system must incorporate robust web security protocols and must comply with established security standards.

- The deployment should ensure scalability, security, and minimal disruption.

1. Purpose of the Assignment

The purpose of this assignment is to develop a crop monitoring system using remote sensing and field data mapping that leverages remote sensing and field data mapping to enhance agricultural decision-making. The system will enable timely detection of crop types, health status, and yield estimates, while also supporting environmental monitoring and farmer advisories to promote sustainable and climate-resilient farming practices and regenerative outcomes verification using the real time data.

2. Methodology

Better Cotton expects the consultant/firm to develop a methodology based on the purpose and scope of work of the assignment. The consultant/firm should also provide justification for proposing a particular approach and methodology with detailed discussion in their proposal. The final decision on the approach and methodology to be used will be done during inception meeting in consultation with the Better Cotton team. The proposed methodology for developing the remote sensing system must be aligned with IT requirements mentioned above.

3. Deliverables

Better Cotton is expecting the following deliverables to be completed by the consultant/firm.

1. **Inception Report:** The consultant/firm must deliver an inception report detailing the proposed methodology, implementation timeframe, cost-benefit analysis, risk assessment, and mitigation strategies. This report will serve as the foundational blueprint to ensure clarity and alignment across stakeholders.
2. **Remote Sensing Module**: A functional remote sensing module should be developed to analyse satellite imagery and other spatial data for crop detection, yield estimation, land cover changes, and environmental monitoring. The module must integrate seamlessly with existing geospatial systems.
3. **Web GIS Module:** The GIS module must enable interactive mapping, data visualisation, and spatial analysis. It should support functionalities like field boundary delineation and overlaying multiple environmental datasets to guide data-driven decisions at farm and landscape levels.
4. **Farmer Advisories Module:** The consultant/firm should design an intuitive module for delivering personalised advisories to farmers. It should use field data, crop health insights, and seasonal forecasts to generate recommendations on sustainable practices, pest control, irrigation, and climate resilience.
5. **Draft and Final Modules:** Initial drafts of each technical module must be submitted for Better Cotton review and feedback. Final versions should incorporate revisions based on validation results and user/field testing, ensuring each module is functional, user-friendly, and contextually relevant.
6. **System Deployment, Source Code, Manual and Guidelines:** The final system must be deployed within the Better Cotton's Azure-based infrastructure. The consultant/firm must also provide a comprehensive operational manual, source code, and user guidelines to support onboarding, troubleshooting, and long-term maintenance.

High-level Timeline

12 Sep 2025	Applications deadline All applications must be submitted via this form.
18 Sep 2025	Applications review & shortlisting / Interviews
25 Sep 2025	The successful applicant will be notified Unsuccessful shortlisted applicants will also be notified
01 October 2025	**Start of the consultancy**
By 30/03/2026	All deliverables completed and invoices submitted. We are aware of the short timeline and leave flexibility to the bidders on how to achieve this but do need to achieve full delivery before the end of the year.

Required Skills & Knowledge

Skills, Knowledge and Experience of the lead consultant
Essential
Firms/Companies: Companies of good standing and relevant track record. Legally be able to work on remote sensing and GIS technologies. **Individuals:** A postgraduate qualification preferably doctorate/post doctorate in a relevant field such of space science, remote sensing, geospatial technologies or other relevant fields.
A minimum of 7 years of professional experience in developing Web/GIS based system or working on geospatial technologies and applications.
Experience of developing large scale and scalable web-based systems and polygonal data generation and use for applications.
Have fulfilled obligations related to payment of government taxes and have valid registration certificate, Tax Registration, Certificate of Incorporation, and other legal business permit/license that allows the supplier/Service Provider to work legally.
Excellent written and verbal communication skills in English
Excellent facilitation and coordination skills
Optional
Working knowledge of the agriculture sector particularly cotton.

In addition to skills, competencies, and expertise, we will consider value for money and demonstrable commitment to the field of sustainability to evaluate applications.

Getting to know you

Company Information	• Full Legal Name • Address • Website • Background • Vision and Mission • Contact person & email address • Telephone number • Your customers
Experience	We'll ask you to tell us about previous assignments
Certifications & Credentials	What certifications and/or credentials do you have? How do these relate to your area of work?
Technical Skills	What relevant skills and expertise do you have? What methodologies have you used in past projects/assignments?
Data Security (Optional for individuals and smaller organisations, but mandatory for larger firms, and Traceability and Data Teams)	Technical Security – We'll ask a technical overview of how your keep data secure in your tool(s), including details of any technical security certifications you hold. Data Protection – Describe your approach to complying with data protection legislation from distinct parts of the world
Fees	Tell us about your fee structure and what it includes: • Hourly or daily rate / per head (if applicable) • Fees per specific tasks/deliverables • Refer to the financial proposal paragraph below.
Company Commitments	What policies do you have in place (as applicable) on sustainability, inclusion and decent work?

Application Requirements

Please note that we have changed our RFP submission protocol, and this is now in two phases:

- **Phase 1: Initial details will be submitted on the form found in this link.**
- **Phase 2: You will receive an email with live links to upload relevant documents (please check your Spam and Junk folders).**

Proposals sent to respond to this Request for Proposals must include the following:

- A succinct, well-documented **Technical Proposal** that includes:
  - Understanding of the assignment including a summary of tasks and main objectives
  - The proposed approach and methodology including working approach and justification for the working approach and methodology.
  - Activities and their corresponding timeline.

    - A clear description of the project team members with details of their relevant. experience and their CVs. If any external experts will be engaged, share their profiles as well.
    - At least three references from similar work conducted by the consultant/firm.
- At least one sample of previous relevant work ***(the contents of which will remain confidential and will be used for the sole purpose of evaluating the submission and link of online platform if publicly available).***
- A Financial Proposal: please provide a detailed budget including the time allocated for each activity and the daily rates per person. Please note that ALL costs must be included in the detailed budget including expenses, traveling costs, and taxes. Value for money is highly appreciated and preferred.
- Be capable of full invoicing and delivery before 30/03/2026.

Evaluation Criteria

Proposals will be evaluated based on the following criteria:

Technical Evaluation Criteria
- Demonstrated understanding of this RFP.
- Quality and clarity of the proposal.
- Relevant professional experience of the proposed consultant(s)/firm.
- Quality and relevance of the sample work submitted.

Financial Evaluation Criteria
- Quality and clarity of budget provided, and level of detail included.
- Value for money.

We thank all applicants for their interest. However, only shortlisted applicants will be contacted.

Better Cotton is committed to good practice and transparency in the management of natural, human and financial resources. All applications will be reviewed under the principles and subject to Better Cotton's policies on equal opportunity, non-discrimination, anti-bribery & corruption and conflict of interest.

Questions & Answers for RFP 2025-8-ID-CMRS

Note: The questions are in black, while the answers are to be in Better Cotton's branded green. Delete this line once the question and answers have been completed and are ready to be added on to the RFP for publishing

1. **Question 1**

Are you able to provide a rough order of magnitude cost range for the project, please?

Answer

We will not be sharing the budget with service providers to ensure competitive prices and value for money.

2. **Question 2**

Open-source vs. Commercial Solutions – The RFP does not explicitly state whether consultants are expected to rely on freely available datasets (e.g., Sentinel-2) or commercial sources. Could you clarify if Better Cotton prefers open-source solutions or commercial datasets? This distinction will significantly impact both cost and the level of accuracy that can be achieved.

Answer

The consultant explicitly needs to rely on **freely available datasets** (e.g., Sentinel-2, Landsat) and at the pilot stage we are not going for commercial sources.

3. **Question 3**

Spatial Extents – Could you provide more details on the approximate spatial extent (in hectares or km²) of the pilot sites in *Pakistan, India, Mozambique, and Australia*? This will help us estimate workload, resource allocation, and timeline feasibility.

Answer

Yes, we have farmers data and estimated hectares in each target country as follows:

1. Pakistan (500-600 thousand hectares)
2. India (1300-1400 thousand hectares)
3. Mozambique (60,000 to 100,000 hectares)

4. **Question 4**

Training Data for Crop Classification – Will Better Cotton provide access to any existing training datasets (e.g., crop type labels, crop yields, field-level ground truth, and similar data) in spatial (lat/long) format?

Answer

Yes, we have datasets, and we will share those datasets with selected consultants at the inception stage. We have producer units' data in (lat/long) format.

5. **Question 5**

The RFP highlights deployment on Azure. Will Better Cotton provide access to its existing Azure ecosystem for hosting the web application and data warehouse, or is the consultant expected to provision and manage Azure services independently?

Answer

This crop monitoring system will be part of the existing Azure based IT system of Better Cotton for hosting web applications and data warehouse.

6. **Question 6**

The deliverables section of the RfP mentions a *"Farmer Advisories Module"* and *"training module on Web-GIS application use in the field."* Could you clarify whether development of a **mobile application (e.g., Android app for farmers)** is also expected, or if advisories will be delivered solely through the web platform?

Answer
No android app for the farmers is not expected at this stage.

7. **Question 7**

For crop monitoring and phenology/change detection, is Better Cotton expecting the consultant to define appropriate temporal windows, or do you have preferred timeframes (e.g., seasonal cycles)? This will influence dataset selection (e.g., Sentinel-2: higher spatial, lower temporal range vs. Landsat: lower spatial, higher temporal range).

Answer
We are expecting the temporal window of 10 years for cotton crop season cycle particularly.

8. **Question 8**

We are a team of individual consultants interested in the RFP: Development of a Crop Monitoring System using Remote Sensing and Field Data Mapping. Could you please confirm if individual consultants (as a consortium) are eligible to submit a proposal. Please also advise on the submission process or requirements for individual consultants.

Answer
Yes, Individual consultant/team of consultants is eligible to apply for the work. The submission process of individual consultants and firms is same as elaborated in the ToRs document.

9. **Question 9**

The required time span, specific seasons, and crop focus are not specified. Kindly confirm the span of temporal imagery needed and the targeted growing seasons.

Answer
The span of temporal imagery will be 10 years for cotton crop growing season.

10. **Question 10**

Please explain which datasets Better Cotton can provide, and we'll assume the others are independently sourced.

Answer
Better Cotton can provide datasets like farmers groups/Producer Units locations (long/lat) in each country,

11. **Question 11**

While three countries are mentioned (Pakistan, India, Mozambique), the specific data on the number of farms is not defined. Please clarify the targeted farms.

Answer
The number of farmers in each country is as follows:
Pakistan: 300,000 to 350,000
India: 900,000 to 1,000,000
Mozambique: 50,000 to 100,000

12. Question 12

What level of granularity does BCI expect for the boundary delineation and analysis, particularly given the use of Sentinel-2 satellite imagery?

Answer

Better Cotton is expecting the possible high resolution satellite imagery (10 meters) or better if available.

13. Question 13

The resolution of Sentinel-2 imagery is not clear enough for the farm boundary delineation through the ML process. Higher-resolution commercial satellite imagery may be required.

Answer

Better Cotton preferred sources at this stage are open sources. However, consultants can propose commercial satellite for field boundary delineation (that can increase the cost significantly) but competitive prices and value for money will be considered for proposal evaluation,

14. Question 14

The ODK survey is mentioned in the RFP on page 2; ground survey or field verification is required, but it is not mentioned in the Scope of Work.

Answer

No, ground survey or field verification is not required. On page 2 we have included a summary of a study where it was recommended.

15. Question 15

Are APIs already available for integration with BCI's existing systems and datasets?

Answer

TBD

16. Question 16

Farmers Module will be mobile-first or primarily web-based?

Answer

Farmers module will be primarily web based.

17. Question 17

Is the training focus intended for Better Cotton staff capacity-building, or for direct delivery to farmers and local stakeholders?

Answer

Consultants will conduct Better Cotton staff training and training module only for farmers and local stakeholders' training.

18. Question 18

Is it understood that the ML detection of the farm boundaries and image segmentation will happen on a different cloud than the actual application itself? The remote sensing and GIS modules will be calling the already delineated farm boundaries and outputs from the tools and algorithms for biomass detection, crop health monitoring, yield estimation, etc.

Answer
We are open to ideas and methodologies that are scalable and resource efficient. We don't foresee a need for near real time boundary detection as they rarely change within season. However, the ability to run the delineation algorithm over time (lesser frequency), can serve the purpose.

19. **Question 19**

Are you expecting the implementation in all 4 countries (Pakistan, India, Mozambique, and Australia)?

Answer
This RFP document is for development of algorithms and crop monitoring system that will be field tested in Pakistan, India and Mozambique but expecting this would be scalable to other countries.

20. **Question 20**

Do you have any pilot regions in mind?

Answer
Yes, this system will be piloted and field tested in Pakistan, India and Mozambique in Better Cotton working locations.

21. **Question 21**

Can we bid for Pakistan only? Specifically for advisories, we have data on Pakistan, but we will need time and resources for other regions. Please clarify.

Answer
We are expecting a single system for all three pilot countries and would prefer to have a single system for all locations. We are not encouraging the bids at country level.

22. **Question 22**

What is the exact timeline? The bid document mentions "need to achieve full delivery before the end of the year" but it also mentions 30th March 2026. Is it the end of next year?

Answer
The timeline to complete the development and deployment of the crop monitoring system is **30 March 2026**. Earlier it would be better.

23. **Question 23**

Are certifications and credentials required on the company level, or individuals' certifications also be used?

Answer
Individuals/Individuals certification can also apply. No restrictions on firms only.

24. **Question 24**

Fees will be finalized on scope and budget – Can we get a ceiling on the budget, any approximate amount?

Answer

We cannot share the budget with service providers to ensure competitive prices and value for money. You can bid according to the scope of work and fee that one consultant will charge.

25. Question 25

Do we need to submit only one sample of previous relevant work? What is a suitable number of previous works?

Answer

One previous sample is pre-requisite for submission of application. You can submit as many samples as you want that will strengthen your application. The sample reports are used solely for the purpose of evaluation, and the contents of the report will remain confidential.

26. Question 26

For the pilot testing in Pakistan, India, and Mozambique — does Better Cotton prefer one large continuous pilot area per country, or multiple smaller representative sites across different agro-ecological zones? Also, what is the approximate scale of area that Better Cotton expects to be covered during the pilot?

Answer

We want to pilot test the system in multiple smaller representative sites across cotton growing areas in three countries. The approximate area coverage and estimated hectares in each target country as follows:

1. Pakistan (500-600 thousand hectares)
2. India (1300-1400 thousand hectares)
3. Mozambique (60,000 to 100,000 hectares)

27. Question 27

Alongside open-source datasets, can we leverage national soil survey datasets (e.g., Pakistan Soil Survey data on pH, nitrogen, moisture, organic matter) where available? Which soil health parameters should be prioritized if full coverage is not feasible?

Answer

Yes, if such datasets are available that can be leveraged. We have mentioned in the ToRs that soil health parameters like soil organic matter, soil nitrogen status, moisture contents etc. But consultant/technical firm can propose the additional soil health parameters that can be assessed though crop monitoring system, that will add value to the technical proposal.

28. Question 28

What is the expected frequency of imagery updates for detecting changes — e.g., every 5–10 days (Sentinel-2), monthly, or another refresh cycle??

Answer

Consultant can propose this. Short frequency can be preferred.

29. Question 29

Since smallholder farmers often practice intercropping, should the monitoring system focus exclusively on cotton, or also detect other crops grown within the same fields?

Answer

At this stage the system will only focus on cotton crop.

30. Question 30

Will Better Cotton provide access to existing APIs or integration points with its IT systems, or should we assume developing integration from scratch??

Answer

This is flexible. Consultant can propose at their end.

31. Question 31

Should the farmer advisory module be designed as rule-based recommendations (static decision trees) or as AI/ML-driven adaptive advisories linked to real-time soil, crop, and weather data?

Answer

We will prefer AI/ML driven adaptive advisories linked to real time soil crop and weather data.

32. Question 32

For the monitoring platform overall, what is the expected data refresh frequency for analytics and dashboards — weekly, monthly, or near real-time?

Answer

Consultant can propose this. Short frequency can be preferred.

33. Question 33

Should training during the pilot phase be focused only on Better Cotton staff, or also extended to local farmer groups and implementing partners in each pilot region?

Answer

The initial training in the crop monitoring system will focus on the better cotton staff and programme partners project staff only.

34. Question 34

After system handover in March 2026, does Better Cotton require ongoing technical support and maintenance, or only delivery of source code, documentation, and training materials?

Answer

At this stage we are focusing on delivery of system and source code, documentation and training materials. But consultants can offer technical support and maintenance with associated costs. That will be decided later.

35. Question 35

In the proposal evaluation, how will Better Cotton weigh cost-effectiveness versus innovation (e.g., use of AI/deep learning or higher-resolution commercial imagery)?

Answer

We are expecting a system using open sources data with possible higher frequency from open sources. We are not expecting commercial imagery, but a consultant can propose with cost implications.

36. Question 36

Can you please provide some clarification on the data requirements and processing? If you want to enable historical processing, the data cost would go up exponentially, based on the range of the data coverage.

Answer

We are not expecting historical processing (previous years data).

37. Question 37

Please also share the Better Cotton working locations. You mentioned "field tested in Pakistan, India and Mozambique in Better Cotton working locations", knowing the exact locations (and total area) would enable us to prepare a better system and make an accurate cost estimate.

Answer

We are providing the number of farmers and hectares under cotton crop cultivation in cotton growing areas in all three countries.
The approximate area coverage and estimated hectares in each target country as follows:

1. Pakistan (500-600 thousand hectares)
2. India (1300-1400 thousand hectares)
3. Mozambique (60,000 to 100,000 hectares)

The number of farmers in each country is as follows:

1. Pakistan: 300,000 to 350,000
2. India: 900,000 to 1,000,000
3. Mozambique: 50,000 to 100,000

38. Question 38

The scope includes algorithms for crop detection, biomass detection, pest/disease detection, soil health, weather monitoring, and farmer advisories. Please confirm whether the consultant must develop all algorithms in-house or whether integration/customization of third-party/existing models will be acceptable.

Answer

This will be proposed by the consultant. Consultant can propose developing all algorithms in house or integration with third party/existing models.

39. Question 39

For "integration with government datasets," will Better Cotton facilitate access to official datasets (which may require licenses/fees), or should the vendor arrange and bear responsibility for such access?

Answer

This is yet to be finalized. We will mostly rely on publicly available government information.

40. Question 40

If third-party datasets, APIs, or commercial imagery (e.g., Sentinel-2 alternatives) are required, who will bear the licensing and subscription costs—the vendor or Better Cotton?
?

Answer

The consultant will bear the cost at the time of development of algorithms.

41. Question 41

For the “dynamic web-based system,” kindly confirm: (a) expected user load/concurrency, (b) preferred technology stack (if any), and (c) hosting/maintenance responsibilities post-deployment.

Answer

Response on all three points is below.

a- medium level usage (max 100 users at a time)- vendor needs to come up with their solution
b- tech stack should be ideally open source / long term
c- will be hosted at Better Cotton's Cloud- For prototyping., vendor has to show on their Azure's Platform

42. Question 42

For training and guidelines, please specify the number of training sessions expected delivery format (virtual/in-person), geographic coverage, and languages required.

Answer

We are expecting a one training session for better cotton staff and programme partner project team that can be in-person or virtual. The preferred training language will be English. Consultant can suggest modality for this.

43. Question 43

Please define performance/acceptance criteria for “functional” modules—such as required accuracy, update frequency, and validation benchmarks.

Answer

Anything which is based on widely accepted standards will serve the purpose.

44. Question 44

Should the vendor also build dissemination channels (SMS, mobile app, etc.), or only provide advisory outputs for Better Cotton to distribute?

Answer

No. Mobile app or SMS etc. is not required at this stage.

45. Question 45

Will Better Cotton provide Azure hosting and long-term infrastructure, or is the vendor expected to manage hosting, monitoring, and maintenance after handover?

Answer

It's yet to be defined. Consultant can suggest appropriate solutions. Most probably we will go with existing azure hosting.

46. Question 46

The RFP requires data to be stored in country-specific locations. Will Better Cotton provide compliant infrastructure, or is the vendor responsible for ensuring compliance with local data residency laws and related costs?

Answer

It's yet to be defined. Consultant can suggest appropriate solutions. Most probably we will go with existing azure hosting.

47. Question 47

Since the final methodology will be confirmed at inception, please clarify whether changes to scope/methodology at that stage will be considered variation orders with cost/time implications.

Answer

There could be a possibility of slight variations but major changes in cost/time are not expected.

48. Question 48

There is a reference to delivery by 30 March 2026, but also a statement requiring “full delivery before the end of the year” (Dec 2025). Kindly confirm the completion deadline.

Answer

The timeline to complete the development and deployment of the crop monitoring system is **30 March 2026**. Earlier would be better and can be preferred.

49. Question 49

Please confirm the method of selection. Will proposals be evaluated under a least-cost selection model, or under Quality- and Cost-Based Selection (QCBS) with defined technical/financial weightage?

Answer

We have provided the proposal evaluation criteria in the terms of reference document. That will be based on quality of technical proposal/technical weightage, financial offer/financial weightage, previous experience and sample work highlighted with proposal. The value for money will be considered.

50. Question 50

All costs must be included, including travel. Kindly clarify: (a) whether international travel to pilot countries (Pakistan, India, Mozambique, Australia) is mandatory, (b) the expected number/duration of such visits, and (c) how out-of-pocket expenses (travel, boarding, etc.) will be treated—will these be reimbursable at actuals or included as lump-sum estimates in the bid?

Answer

No international travel to pilot testing countries required. We have mentioned any travel and meetings related to scope of work must be included in the financial proposal (if required

51. Question 51

For each geographic pilot site, will Better Cotton provide the georeferenced Area of Interest (AOI) as a standard GIS file (e.g., Shapefile, GeoJSON) before project inception, or is the consultant responsible for defining AOIs?

Answer

Yes, we have the georeferenced sites in each pilot location, that can be provided to selected consultant after signing of agreement.

52. Question 52

Please specify the required or preferred data format for all key data exchanges, particularly for satellite imagery and spatial data (e.g., GeoTIFF, Cloud Optimized GeoTIFF (COG), Shapefile, GeoJSON, CSV) for platform inputs and outputs.

Answer

It should be well known GIS/Geo standard formats (both raster's and vectors)

53. Question 53

Are standardized coordinate reference systems (CRS), such as WGS84 or UTM, mandatory for all spatial deliverables (across all geographies), or can the consultant propose context-specific CRS and naming conventions?

Answer

Consultants can propose based on their experience.

54. Question 54

For integration with local agricultural practices and government datasets, does the consultant need to implement data harmonization/conversion for different schemas and spatial references, or will Better Cotton supply already-standardized inputs?

Answer

Yet to be decided, consultant can suggest the solution.

55. Question 55

Are there any guidelines or restrictions regarding preferred or disallowed satellite sensors, UAV providers, or data vendors if new imagery is procured? Is funding for external imagery procurement available from Better Cotton?

Answer

At this stage we are expecting a system based on open-source data. External commercial imagery procurement is not required.

56. Question 56

Are there required identity management/user authentication standards (e.g., Microsoft Entra, OAuth2, SAML) to be integrated for role-based access and multi-tenant use?

Answer

Yes, that can be integrated, Consultant can propose this.

57. Question 57

Should the web GIS platform allow for external API access (e.g., for integration by third parties), bulk data download/export, or support OGC-compliant services such as Web Map Service (WMS) and Web Feature Service (WFS)?

Answer

Yes, that can be done. The consultant can propose this.

58. Question 58

Are there technical constraints regarding serving vector/raster data (e.g., maximum file sizes, required tiling schemes, S3-hosted COGs, etc.), or is this left to the consultant's discretion?

Answer

It's on consultant discretion what they prefer to propose.

59. Question 59

What is the required update frequency (e.g., daily, weekly) for advisories, and which local languages must be supported for dissemination?

Answer

We are expecting a system using open sources data with possible higher frequency from open sources. Local languages like Urdu, Hindi and Portuguese must be supported. Can be further discussed at inception stage.

60. Question 60

Beyond cotton, are there other crops to be included in the monitoring system?

Answer

No, we are only focusing on cotton crops.

61. Question 61

Are there preferred frameworks, libraries, or cloud services (e.g., Azure AI, TensorFlow, PyTorch) that should be used?

Answer

Yes, as mentioned in the ToRs, Azure AI is the preferred cloud service.

62. Question 62

Could you share details of Better Cotton's current IT systems and databases for integration?

Answer

Its Azure based system, details will be shared at inception stage after signing of agreement with successful bidder.

63. Question 63

For field boundary delineation, should we rely on open datasets (Sentinel, Landsat) or will commercial imagery subscriptions be supported?

Answer

The consultant explicitly needs to rely on **freely available datasets** (e.g., Sentinel-2, Landsat) and at the pilot stage we are not going for commercial sources.

64. Question 64

To what extent should offline access be available for field staff in low-connectivity regions?

Answer

It is expected to be proposed by the consultant. If the system had offline access for field staff it would be preferable.

65. Question 65

Should the system support multiple languages? If yes, which languages are priorities?

Answer

Yes, the system must support the local languages of pilot test locations like Urdu, Hindi and Portuguese must be supported. Can be further discussed at inception stage.

66. Question 66

Is the Power BI dashboard mandatory, or may we propose alternative visualization tools?

Answer

The consultant can propose this. Power BI can be preferred.

67. Question 67

What existing ground-truth datasets are available for training and validation?

Answer

We have Georeferenced locations of the producer units in cotton growing areas in all locations. We have farmers data, practices data and data of some soil health parameters for some locations.

68. Question 68

Who will collect new ground-truth data (Better Cotton, partners, or the consultant)?

Answer

Better Cotton/partners will collect that data. This data collection is not expected from a consultant.

69. Question 69

Are there prescribed standards for data collection and validation (e.g., ODK/Kobo, ISO geospatial standards)?

Answer

Yes, we use ODK in some instances, but the consultant will propose this.

70. Question 70

Which data protection regulations must the system comply with (e.g., GDPR, local laws in Pakistan/India/Mozambique)?

Answer

The system must comply with General Data Protection Regulations and local laws in field testing countries.

71. Question 71

Are there specific cybersecurity standards expected (e.g., encryption, MFA, ISO certifications)?

Answer

Yes, it's required. Consultants can propose preferred cybersecurity standards.

72. Question 72

Who will retain ownership of the source code and intellectual property?

Answer

Better Cotton will retain this.

73. Question 73

Is phased deployment (per country) acceptable, or must all pilot countries launch simultaneously?

Answer

Its depends, phased deployment is acceptable but it must be completed by Mar 2026.

74. Question 74

Should pilot regions be prioritized in a specific order?

Answer

No, pilot testing will be done simultaneously at all locations.

75. Question 75

What infrastructure (servers, licenses, API keys) will Better Cotton provide, and what should be budgeted by the consultant?

Answer

The system will be deployed in Azure AI (the existing better cotton system), System development, integration and deployments will be the responsibility of the consultant that can be budgeted.

76. Question 76

Are open-source components permitted?

Answer

Yes, all open sources components permitted but possible highly resolution in open sources.

77. Question 77

What is the expected profile and approximate number of end users for training (field officers, farmers, administrators)?

Answer

This is yet to be defined. It will primarily include Better Cotton staff, programme partners' project staff and some of the field staff members from partners.

78. Question 78

Should training materials be digital only, or also printed in local languages?

Answer

The digital training material will serve the purpose.

79. Question 79

What format is preferred for farmer-friendly guidelines (booklets, mobile app integration, videos, infographics)?

Answer

Farmer-friendly guidelines, videos or infographics can be a part of the training material.
Mobile App is not required at this stage.

80. Question 80

How many review/feedback cycles are expected for draft modules?

Answer

It depends, not defined at this stage.

81. Question 81

Will user acceptance testing (UAT) be required in all pilot regions?

Answer

Yes, that can be done, the consultant can propose this.

82. Question 82

Will Better Cotton provide sample datasets and test users for validation?

Answer

Yes, available datasets will be provided. May be consultant has to collect some datasets.
Yes, we can provide test users for validation.

83. Question 83

Could you share the expected payment schedule (milestone-based, monthly, or on completion)?

Answer

The payment schedule will be milestone based, maybe 3-4 payments which will be decided at the agreement stage.

84. Question 84

Is there a ceiling budget or only a value-for-money assessment?

Answer

We are looking for competitive prices and value for money will be considered.

85. Question 85

Are subcontractors permitted, and should their details be included in the proposal?

Answer

Usually, we don't encourage subcontractors but if you want to include any subcontractor that information must be shared with the proposal.

86. Question 86

We note that the project start date is set for 1 October 2025, with completion expected by 30 March 2026 (approximately six months). Given the scope—including algorithm development, multi-country deployment, ground-truthing, system integration, and training; this timeline is ambitious.
A phased delivery approach (e.g., initial MVP within the proposed timeframe, followed by staged rollouts and refinements) may help balance speed with scientific accuracy, security, and adoption.

Answer

Thank you for these comments and suggestions. That can be included and suggested in the proposal with appropriate justification.