



**National
Research
Foundation**

INVITATION TO BID (SBD 1) on procurement requirements

YOU ARE HEREBY INVITED TO BID FOR THE FOLLOWING SPECIFIED SUPPLY REQUIREMENTS

BID NUMBER	NRF/SAEON/HPME/2017
CLOSING DATE AND TIME	25 April 2016 and 11:00am

1 BID DESCRIPTION

Supply and Delivery of High Precision Meteorological Equipment at SAEON Nodes in Ndlovu node (Phalaborwa), Grasslands node (Pietermaritzburg), Fynbos node (Cape Town), Arid node (Kimberly) and for the Expanded Freshwater and Terrestrial Ecological Observation Network (ETFEON) sites.

Specifically we require:

1. A minimum purchase (budget available) of 5 high precision, robust, full Automatic Weather Stations (AWS), with programmable loggers as well as a downstream supply of replacement components and consumables. Additional stations may be purchased if/as additional budget becomes available. **(SYSTEM 1)**
2. A minimum purchase (budget available) of 11 high precision “mini” automatic weather stations that can be set up in variable combinations of Rain and/or Wind and/or temperature-relative humidity and/or Short wave radiation sensors, complete with programmable data loggers as well as with a downstream supply of replacement components and consumables. Additional stations may be purchased if/as additional budget becomes available. **(SYSTEM 2)**
3. A minimum purchase (budget available) of 109 High precision rain tipping bucket rain gauges (sans logger), that can be fitted with bird spikes if required, as well as a downstream supply of replacement components. Additional stations may be purchased if/as additional budget becomes available **(SYSTEM 3)**
4. Appropriate software for operating Systems 1 & 2, including regular firmware and

<p>software upgrades (SYSTEM 4).</p> <p>5. A minimum purchase (budget available) of one back up logger and sensor set for SYSTEM 1 (SYSTEM 5) to enable swop outs when required.</p> <p>6. Ad hoc supply of spare parts, replacement components and sub components, consumables, and calibration services that meet the specification laid out in this document or are the latest approved specifications at time of purchase, as well as incidental purchases required for equipment compatible to this array.</p>	
<p>Bidders must sign the signature page of the form SBD1 validating all documents included in the response to this invitation.</p>	
<p>The successful bidder and the NRF will sign the written Contract Form (SBD 7) once the delegated authority has approved the award of such contract.</p>	
<p>Preferential Procurement System Applicable:</p>	<p>90:10</p>
<p>Validity Period From Date Of Closure:</p>	<p>150 days</p>
<p>BID DOCUMENTS ARE TO BE DEPOSITED IN THE BID BOX AT:</p>	
<p>PHYSICAL ADDRESS Bid Box at Reception SAEON office, Reception Desk Persequor Technopark, 41 The Woods, Ground Floor De Havilland Crescent Brummeria, Pretoria RSA</p> <p>Bid Box open from 8 am to p.m. Monday to Friday</p>	<p>ADDRESSED AS FOLLOWS: On the face of each envelope, the Bid Number and Bidder's Name, Postal Address, Contact Name, Telephone Number and email address</p>
<p>BIDDERS ARE REQUIRED TO DELIVER THEIR BID TO THE CORRECT ADDRESS TIMEOUSLY IN ORDER FOR THE NRF TO CONSIDER IT. THE NRF WILL NOT CONSIDER ANY BIDS RECEIVED LATER THAN THE CLOSING DATE AND TIME NOR RETURN THESE TO THE BIDDER.</p>	
<p>Bidders must submit their bid response on the official bid invitation forms (not to be re-typed) with additional information provided on attached supporting schedules. The NRF provides the checklist "Returnable Documents" of all required documentation with certain documentation mandatory for entering the evaluation phase.</p> <p>Non-submission of these marked documents will lead to disqualification of the bidder.</p>	

	THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS – 2017 AS AMENDED.	
	THIS BID IS SUBJECT TO THE GENERAL CONDITIONS OF CONTRACT AND SPECIAL CONDITIONS OF CONTRACT STIPULATED IN THIS DOCUMENT. THE BIDDER READ AND ACCEPTED THESE CONDITIONS OF CONTRACT HAS EVIDENCED BY THE BIDDER'S SIGNATURE ON EACH PAGE.	
	REGISTRATION ON THE CENTRAL SUPPLIER DATABASE (CSD):	
	<p>The bidder is on the National Treasury's Central Supplier Database in order to do business with the NRF and for the NRF to award a bid and to sign the subsequent contract. The NRF is an organ of state. Registration on the CSD (www.csd.gov.za) is compulsory and bids from unregistered bidders are not considered.</p> <p>National Treasury Contact Details: 012 406 9222 or email csd.support@treasury.gov.za</p>	
2 SETS OF BID DOCUMENTS REQUIRED:		
	Number of ORIGINAL documents for contract signing	3
	<p>Bidders must submit the bid in hard copy format (paper document) to the NRF. The hard copy of these original sets of bid documents including the bidder's response to the specification, the bidder's pricing, and the SBD 7, (contract signature page signed by both parties), serve as the legal bid contract document and the master record between the bidder and the NRF. The bidders attach the originals or certified copies of any certificates stipulated in this document to these original sets of bid documents.</p> <p>Any discrepancy between the evaluation copies and the master record, the master record will prevail. Any discrepancy between the original sets deposited with the NRF and that kept by the bidder, the original set deposited with the NRF is the master contract for both parties.</p>	
	Number of EVALUATION copies:	5
Bidders mark documents as either " Original " or " Copy for evaluation " and number all pages sequentially. Bidders group documents into "PROPOSAL" and "PRICING" Sections.		
	Two envelope system required	YES
	<p>The objective for the use of the two-envelope system is to evaluate the Proposals Section without reference to the Price Section ensuring both sections are evaluated fairly and unbiased.</p> <p>The first envelope holds all documents excluding the SBD3 (price summary schedule) and</p>	

detailed supporting pricing documentation. The second envelope holds the SBD3 and the detailed supporting pricing documentation. An outer envelope encloses both envelopes that have the envelope addressing as stated in this document.

The NRF only opens the proposal – the first envelope – at the evaluation stage and only opens the pricing – the second envelope – for those bidders who meet the predefined threshold at the proposal evaluation.

3 ENQUIRIES CAN BE DIRECTED TO THE FOLLOWING

TECHNICAL ENQUIRIES

Sue Van Rensburg

Email: sue@saeon.ac.za

Tel: 033 347 5201

SUPPLY CHAIN MANAGEMENT ENQUIRIES

Lawrence Matsena

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4 INTRODUCTION TO THE NRF

The National Research Foundation (“NRF”) is a juristic person established in terms of the National Research Foundation Act, Act 23 of 1998, and a Schedule 3A Public Entity in terms of the Public Finance Management Act.

The NRF is the government’s national agency responsible for promoting and supporting research and human capital development through funding researchers, provision of the National Research Platforms, and science outreach platforms/programs to the broader community. The NRF provides these services in all fields of science and technology, including natural science, engineering, social science, and humanities.

The NRF delivers its mandate through its internal business units which are both functional and geographical diverse. Unless specifically noted, all contracts flowing from bidding apply to all of its business units.

5 INTRODUCTION TO THE NRF BUSINESS UNIT RESPONSIBLE FOR THIS BID

The business unit SOUTH AFRICAN ENVIRONMENTAL OBSERVATION NETWORK (SAEON) is a multi-disciplinary research facility for NRF with its primary function is long term in situ environmental observation towards detecting and understanding Global change and promoting its research fields in southern Africa.

6 CONTEXT OF THIS PROCUREMENT

SAEON currently operates six nodes that are strategically situated across geographic regions representing the country’s major biomes. SAEON coordinates an array of multi-disciplinary observation platforms and research programs that are designed to monitor and understand Earth system dynamics and human induced changes to these over multiple scales. These initiatives are currently being advanced through the development of a coordinated instrument network that must contribute quality, long-term environmental data for research that will ultimately guide evidence-based policy and decision-making. SAEON is committed to scientific excellence and data emanating from these arrays needs to be of a reliable enough quality to support scientific publications and academic use.

The purpose of this bid is to supplement an already existing array of high precision meteorological instruments, with additional meteorological equipment that is comparable and compatible with existing systems as per the minimum specifications laid out in this bid. In addition, this contract will support the procurement of meteorological equipment for ETFEON.

7 RETURNABLE DOCUMENT CHECKLIST TO QUALIFY FOR EVALUATION

RETURNABLE DOCUMENTS	Envelope 1			
(M = Mandatory (Go/No GO))				Bid Section Referen ce
1. Signed and completed Procurement Invitation (SBD 1) as well as the SBD's 4, 6.1, 8 and 9 as well as Section 10 (bidders particulars)	M	YES	NO	See Pg's 47, 23, 26, 12
2. Completed "Minimum Technical Specifications" template provided in Annexure A are completed in response to the specifications in this invitation	M	YES	NO	Pg 50
3. Data/ technical specifications sheets for all sensors and loggers must be provided, including warranty information	M	YES	NO	
4. Evidence of capacity to execute this bid must be provided to demonstrate the bidder has been in business for at least 5 years and able to provide the equipment outlined within this bid.	M	YES	NO	
5. Written Reference letter 1 as per in the reference format specified in this document (Annexure A),	M	YES	NO	Pg 53
6. Written Reference letter 2 as per in the reference format specified in this document (Annexure A),	M	YES	NO	Pg 53
7. Written Reference letter 3 as per in the reference format specified in this document (Annexure A),	M	YES	NO	Pg 53
8. Proof of Registration on the Government's Central Supplier Database	M	YES	NO	
9. B – BBEE Certificate (South African Companies) or, for companies that have less than R10 million turnover, a sworn affidavit or the certificate issued by the Companies and Intellectual Property Commission (CIPC) is required. A copy of the template for this affidavit is available on the Department of Trade and Industry website	O	YES	NO	

https://www.thedti.gov.za/gazette/Affidavit_EME.pdf				
10. Tax Confirmation Letter from Tax Authorities (Foreign Companies)	M	YES	NO	
RETURNABLE DOCUMENTS	Envelope 2			
11. Summary pricing in the SBD 3 format in this document	M	YES	NO	From Pg 19
12. The non-firm pricing detail calculations as per SBD 3.2	M	YES	NO	
13. Detailed catalogue list with all components itemised and priced for A) all components for systems 1-5, (as per section 12, “Scope of work”) including all required support items (e.g. cabling and mounting items); B) a list of available replacement components and spares and C) compatible commonly used “contingency/ auxiliary items and sensors” that may be used to compliment the systems. Please indicate sections A, B and C accordingly.	M	YES	NO	

8 THE BIDDING PROCESS

This bid is evaluated through a three-stage process

Stage 1 – Compliance to Requirements of Mandatory returnable documents (as per stipulations in Section 7) as these are GO/NO GO gates

Bidders warrant that their proposal document has, as a minimum, the specified documents required for evaluating their proposals. The NRF provides the Returnable Document Checklist listing these including which documents are mandatory (GO/NO GO) to the bidders (see Section 7).

The NRF evaluates only procurement responses that are 100% acceptable in terms of the Returnable Document List. The NRF disqualifies bidders not compliant with this list for Stage 2.

Stage 2 – Evaluation of Bids against Specifications and Quality.

The NRF evaluates each bidder’s written response to the minimum specifications issued in accordance to published evaluation criteria and the associated scoring set outlined in this bid invitation (see “Evaluation Criteria...” Pg. 11).

This consists of an assessment of whether the minimum specifications are met as per

- 1 Minimum specifications listed Table 1, Pg. 50
- 2 Weighted criteria listed in “Evaluation Criteria...” Page 11

The NRF will, where circumstances justifies it, request an evaluation sessions such as interviews/presentations/pitching sessions/proof of functionality sessions with the bidders before concluding the evaluation stage.

Bidders making the minimum evaluation score will pass to stage 3.

Stage 3 – Price/Preference Evaluation

The NRF compares each bidder's pricing proposal on an equal and fair comparison basis that is equitable to all bidders taking into account all aspects of the bids pricing requirements. The NRF ranks the qualifying bids on price and preference points claimed in the following manner:

Price - with the lowest priced Bid meeting the minimum specification as stipulated in the threshold to qualify for this stage receiving the highest price score as set out in the Preferential Procurement Policy 2011 Regulations;

Preference - preference points as claimed in the preference claim form (SBD6.1) supported by a valid BBBEE certification are added to the price ranking scores.

The NRF nominates the bidder with the highest combined score for the contract award subject to the bidder having supplied the relevant administrative documentation.

Bid Procedure Conditions:

Counter Conditions

The NRF draws bidders' attention that amendments to any of the Bid Conditions or setting of counter conditions by bidders will result in the invalidation of such bids.

Response Preparation Costs

The NRF is NOT liable for any costs incurred by a bidder in the process of responding to this Bid Invitation, including on-site presentations.

Cancellation Prior To Awarding

The NRF reserve the right to withdraw and cancel the Bid Invitation at any time prior to making an award.

Collusion, Fraud And Corruption

Any effort by Bidder/s to influence evaluation, comparisons, or award decisions in any manner will result in the rejection and disqualification of the bidder concerned.

Fronting

The NRF, in ensuring that bidders conduct themselves in an honest manner will, as part of the bid evaluation processes where applicable, conduct or initiate the necessary enquiries/investigations to determine the accuracy of the representation made in the bid documents. Should any of the fronting indicators as contained in the “Guidelines on complex Structures and Transactions and Fronting”, issued by the Department of Trade and Industry, be established during such inquiry/investigation, the onus will be on the bidder to prove that fronting does not exist. Failure to do so within a period of 7 days from date of notification will invalidate the bid/contract and may also result in the restriction of the bidder to conduct business with the public sector for a period not exceeding 10 years, in addition to any other remedies the NRF may have against the bidder concerned.

Sub-contracting Direct

The NRF does not enter into any separate contracts with sub-contracted suppliers of its appointed bidders.

Information Provided In The Procurement Invitation

All information contained in this document is solely for the purposes of assisting bidders to prepare their Bids. The NRF prohibits bidders from using any of the information contained herein for other purpose than those stated in this document.

DISCLAIMERS

The NRF has produced this document in good faith. However, the NRF, its agents and its employees and associates, do not warrant its accuracy or completeness. To the extent that the NRF is permitted by law, the NRF will not be liable for any claim whatsoever and how so ever arising (including, without limitation, any claim in contract, negligence or otherwise) for any incorrect or misleading information contained in this document due to any misinterpretation of this document.

The NRF makes no representation, warranty, assurance, guarantee or endorsements to any provider/bidder concerning the document, whether with regard to its accuracy, completeness or otherwise and the NRF shall have no liability towards the responding service providers or any other party in connection therewith.

THRESHOLD TO QUALIFY FOR PRICE/PREFERENCE EVALUATION STAGE 3

Bidders are not eligible for the next stage of evaluation, which is Price and Preference scoring, where

- 1) They fail any Go /No go criteria.
- 2) They fail to meet any of the minimum specifications
- 3) If they score less than the minimum threshold of: 50/100 for weighted criteria

9 EVALUATION CRITERIA FOR EVALUATING BIDDERS RESPONSES				
Stage 1				
Specification 1: All mandatory returnable documentation, as per section 7, are provided by the bidder		Go/ No GO		
Stage 2 (NB: Provide all information as requested Annexure A, pg.50)				
Specification 2: All minimum specifications listed in Table 1 Annexure A, Pg 50 must be met. The Bid evaluation committee will evaluate the bidders responses, verifying if minimum specifications are met using the technical documentation provided.		BEC EVALUATES MEETING OF MINIMUM SPECIFICATIONS		
Specification 3: Evidence of capacity to supply: Bidder provides proof of having been in business for 5 years are more and provide proof of capability of supplying the equipment required within this bid.		Weighted 50%.		
Specification 4: Reference letters provide proof of reliability to deliver equipment and services required to a professional standard.		Weighted 50%.		
Evaluation criteria for weighted specifications		Weight		
Specification 3: Evidence of capacity to supply: Assessment of company profile using documents returned. Proof that the company has existed for 5 or more years and has the ability to supply the required equipment is evident. Evaluate the credibility of the company focusing on proof provided of proven track record to supply equipment required as well as ability for downstream purchases for at least the 5 year contract period		25 Proof that the company has been operating for at least a five year period and has the ability to supply the required equipment	35 Operating for 5 years +, proof of prior supply capacity provided, sound bidder profile. Ability to supply the required equipment well demonstrated.	50 Operating for 5 years + . Strong evidence of supply capacity, past and future impressive bidder profile Ability to supply the required equipment well demonstrated.
Specification 4 Reference letters provide proof of reliability to deliver equipment and services required to a professional standard. Assess references letters		25 All references indicated expectation for all criteria are at least "meet".	35 All reference letters indicating a combination of meets and exceeds for all listed criteria	50 All reference letters indicated all criteria exceed expectations

10 THE BIDDERS PARTICULARS

	Name Of Bidder (As STATED on the Central Supplier Database registration report)
	Represented By
	Postal Address
	Telephone Number
	Cell Phone Number
	Facsimile Number
	E-Mail Address
	VAT Registration Number:
	COMPANY REGISTRATION NUMBER
	DESCRIBE PRINCIPAL BUSINESS ACTIVITIES:

TYPE OF COMPANY/FIRM [Tick applicable box]			
Partnership/Joint Venture/Consortium			
Close Corporation			
(Pty) Limited			
One person business/sole proprietor			
Company			
Other			
COMPANY CLASSIFICATION [Tick applicable box and provide short description]			
Manufacturer:			
Supplier:			
Professional Service Provider:			
Research and Innovation:			
Construction:			
Logistics:			
Other:			
TOTAL NUMBER OF YEARS THE COMPANY/FIRM HAS BEEN IN BUSINESS			
TAX CLEARANCE CERTIFICATE			
Has an original and valid tax affairs in order letter or Central supplier database certificate with green tax status been submitted			Yes/No/NA
SUPPLIER NATIONAL TREASURY'S CENTRAL SUPPLIER DATABASE:			
Supplier Number	M	Unique Registration Reference Number (36 digit)	

PREFERENCE CLAIM	
Preference claim form been submitted for your preference points? (SBD 6.1)	Yes/No/NA
A B-BBEE status level verification certificate must support preference points claimed. Has this been submitted?	Yes/No/NA
Who was the B-BBEE certificate issued by [Tick applicable box]	
A verification agency accredited by the South African Accreditation System (SANAS);	Yes/No/NA
Affidavit confirming turnover and black ownership or Companies and Intellectual Property Commission Certificate confirming turnover and black ownership certified by the registered Commissioner of Oaths	Yes/No/NA
A Registered Auditor registered by IRBA	Yes/No/NA
Are you the accredited representative in South Africa for the goods/services/works offered?	
YES or NO If yes enclose proof in the annexure and summarized detail below	
11 CONTRACT PERIOD	
The contract is for a period of Five (5) years The contract period commences from the date that both parties sign the contract (SBD7 contract signature page)	

12 SCOPE OF WORK

1. A minimum purchase (budget available) of **5** high precision, robust, full Automatic Weather Stations (AWS), with programmable loggers as well as a downstream supply of replacement components and consumables. Additional stations may be purchased if/as additional budget becomes available. **(SYSTEM 1)**
2. A minimum purchase (budget available) of **11** high precision “mini” automatic weather stations that can be set up in variable combinations of Wind and/or Rain and/or temperature-relative humidity and/or Short wave radiation sensors, complete with programmable data loggers as well as with a downstream supply of replacement components, consumables. Additional stations may be purchased if/as additional budget becomes available. **(SYSTEM 2)**
3. A minimum purchase (budget available) **109** High precision rain tipping bucket rain gauges (sans logger), that can be fitted with bird spikes if required as well as a downstream supply of replacement components. Additional stations may be purchased if/as additional budget becomes available **(SYSTEM 3)**
4. Appropriate software for operating systems 1& 2 including regular firmware and software upgrades **(SYSTEM 4)**.
5. A minimum purchase (budget available) of one back up logger and sensor set for SYSTEM 1 **(SYSTEM 5)** to enable swop outs when required.
6. Ad hoc supply of spare parts, replacement components and sub components, consumables, and calibration services that meet the specification laid out in this document or are the latest approved specifications at time of purchase, as well as incidental purchases required for equipment compatible to this array.

Components required for Systems 1-3 and 5 above systems are as follows:

SYSTEM 1: High precision, fully automated weather stations must include the following as an integrated system:

System components	
1	1 x Data Logger (Type 1, programmable with 16 single analogue inputs)
2	1 x Anemometer + Wind Direction Sensor
3	1 x Integrated Air Temperature Sensor + Relative Humidity Sensor with 1x spare replacement filter and sensor element recalibration
4	1 x Radiation shield (6 plate) into which the integrated Temp and RH sensor can fit
5	1 x High precision tipping bucket rain gauge
6	1 x Barometer
7	1 x Pyranometer with a thermopile sensor construction
8	1 x Ultraviolet Radiation Sensor
9	1 x Grass minimum sensor
10	Galvanised mounting pipes with lightning protection
11	All required cabling and sensor mounting equipment
13	1 x GPRS/GSM Modem *(Only required for some localities)
14	Callback system and server use for remote downloading *(Only required for some localities)
15	Required Solar panel(s) and battery (or batteries) which provide sufficient power to run the entire station continuously. *(Only required for some localities)
16	Waterproof enclosure to house data logger, batteries and any other components that require protection from the elements. *(Only required for some localities)
17	A tripod or other secure mounting system to which all other components can attach, at heights of at least 2.5m *(Only required for some localities)
18	Leaf wetness sensor *(Only required for some localities)

19	Card holder compatible with the system plus Extra 2gig memory cards
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*(Only required for some localities) Means some sites will not need these items, however for quotation purposes all should be included. Final quantities of sub components will be confirmed in purchase orders.

SYSTEM 2: High precision rain stations the options of combinations of wind direction + wind speed; **and/or** Temperature + Relative humidity; **and/or** Short wave radiation stations”: I.E. must be capable of a variable combination of at least the following sensor components.

	System component
1	1 x programmable Data Logger (Type 2, 5 single analogue channels)
2	All required cabling and sensor mounting equipment
3	Galvanised mounting pipes with lightning protection
4	1 x high precision tipping bucket rain gauge (0.254mm)
5	1 x Anemometer + Wind Direction Sensor AND/OR item 6 & 7
6	1 x integrated Air Temperature Sensor + Relative Humidity Sensor with Radiation shield (6 plate) into which the integrated Temp and RH sensor can fit with 1x spare replacement filter and sensor element recalibration AND/OR item 5 & 7
7	1 x downward Short wave radiation sensor AND /Or Item 5 &6
8	1 x GPRS/GSM Modem *(Only required for some localities)
9	Callback system and server support for remote downloading *(Only required for some localities)
10	Solar panel(s) and battery (or batteries) which provide sufficient power to run the entire station continuously. *(Only required for some localities)
11	Waterproof enclosure to house data logger, batteries and any other components that require protection from the elements. *(Only required for some localities)

*(Only required for some localities) Means some sites will not need these items, however for quotation purposes all should be included. Final quantities of sub components will be confirmed in purchase orders

SYSTEM 3: High precision tipping bucket rain gauge

	System component
1	1 x high precision tipping Rain gauge with mounting brackets
2	Bird spike *(Only required for some localities)
3	Mast mounting system *(Only required for some localities)

(Only required for some localities) Means some sites will not need these items, however for quotation purposes all should be included. Final quantities of sub components will be confirmed in purchase orders

SYSTEM 5: Back up logger and sensor set for SYSTEM 1

	System components
1	1 x Data Logger (Type 1, programmable with 16 single analogue inputs)
2	1 x Anemometer + Wind Direction Sensor
3	1 x Integrated Air Temperature Sensor + Relative Humidity Sensor with 1x spare replacement filter and sensor element recalibration
4	1 x Radiation shield (6 plate) into which the integrated Temp and RH sensor can fit
5	1 x High precision tipping bucket rain gauge
6	1 x Barometer
7	1 x Pyranometer with a thermopile sensor construction
8	1 x Ultraviolet Radiation Sensor
9	1 x Grass minimum sensor

Detailed minimum specifications for the components required are provided in Table 1, Pg50

NOTE: Some items are marked ***(Only required for some localities)** and others are **“and/or”**. This is to allow flexibility for site specific needs. While the minimum number of “systems” required will not vary, the number and range of components selected for each system will be confirmed when orders are placed. **The quoted value of the contract should be the total value of the total minimum number of all systems required that includes ALL potentially required components listed above.**

13 SPECIAL CONDITIONS FOR MANAGING THE CONTRACTUAL OBLIGATIONS

National Research Foundation

1. Contract Management
 - 1.1. The NRF manages this contract fairly and objectively in accordance to the terms and conditions set out in this document.
2. Contract Communication
 - 2.1. The NRF communicates all communications in writing as well as through email.
 - 2.2. The NRF maintains all contract documentation, correspondence, etc. in a defined contract file open for inspection.
 - 2.3. The NRF states the contract number with secondary reference numbers i.e. purchase numbers on all communication, documentation such as purchase orders issued, etc. The NRF will consider any communication without the contract number on as not being legal communication between the parties and not enacted on by either party as a protection against fraud.
3. The contract coordinator is Susan Janse van Rensburg
4. Communicating
 - 4.1. The purchase of the minimum number of systems required as indicated in the scope of bid set as per the contract :
 - 4.1.1. A quotation (based on the pricing strategy approved in this contract), outlining the specific quantities and components required for the systems to be purchased will be requested. The NRF will then issue a purchase order confirming exactly the components and quantities required.
 - 4.2. When spares parts, replacement sensors, additional sensors, servicing required, maintenance required in terms of the specific contract clauses
 - 4.2.1. A revised quotation will be requested based on the pricing strategy approved in this contract after which the NRF will issue a purchase order confirming the specific items, quantities, and or services required
 - 4.3. Where additional systems, as per the contract scope, are required in future if additional funding becomes available,
 - 4.3.1. A revised quotation will be requested based on the pricing strategy approved in this contract after which NRF will issue a purchase order confirming the specific quantities and items required

- 4.4. Purchase orders shall have the following detail (where this is not provided, the purchase order is not a valid communication in terms of this contract):
- 4.4.1. Purchase Order Number
 - 4.4.2. Contract Number
 - 4.4.3. Quantity
 - 4.4.4. Description of the required procurement. Where detailed, reference must be made to the relevant technical document attached;
 - 4.4.5. Catalogue number if applicable;
 - 4.4.6. Unit price per this contract;
 - 4.4.7. Delivery Date;
 - 4.4.8. Business unit code; and
 - 4.4.9. The specific delivery site(s).
- 4.5. Where prices and/or availability need to be confirmed, a request for an updated detail quotation/information is issued; based on the pricing strategy approved in this contract
- 4.6. **When the NRF issues an official signed purchase order, this confirms the items being procured and confirms that the funds to pay for these are available for release on satisfactory completion by both parties of the specifics, terms and conditions of that purchase order.**
5. **Performance Management**
- 5.1. The NRF measures performance throughout the contract life in accordance with the service levels set in this document.
 - 5.2. Where severe non-performance occurs will terminate the contract earlier in consultation with the contractor.

SERVICE PERFORMANCE LEVELS (MANDATORY)

Service being Measured	Measurement	Minimum level
Supply of high precision meteorological equipment	Check specifications against the actual equipment delivered	Delivered equipment match or exceed the specification outlined in this document
Supply of sub components, replacement sensors, spares and consumables	Check list of available items using catalogue provided	All sensors and loggers can be individually replaced if required.
Supplier provides knowledge and assistance when requested	Time from request to receipt of information	No more than one week
Delivery	Time from order being placed to delivery	No more than 8 weeks

CONTRACTED BIDDER

1. **Managing the Contract**

- 1.1. The contracted party manages this contract fairly and objectively in accordance to the terms and conditions set out in this document.

2. **Contract Manager**

- 2.1. The contracted party appoints a contract manager and notifies the NRF in writing of the name and contact details of the appointed contract manager.

	<p>3. Communication</p> <p>3.1. The contracted party communicates in writing and through email.</p> <p>3.2. The contracted party always STATE the contract number on communication, documentation such as correspondence, purchase orders issued, etc. and will not act upon any communication without the contract number or must verify such communication with the NRF prior to acting upon it.</p> <p>4. Managing the execution of this bid/contract</p> <p>4.1. Where different stages apply, the contracted party communicates in writing the commencement of the stage to the NRF.</p> <p>5. Occupational Health and Safety Requirements</p> <p>5.1. The contracted supplier, once the SBD7 is signed, is responsible for itself, its employees, and those people affected by its operations in terms of the Occupational Health and Safety Act the regulations promulgated in terms thereof (OHS Act No 85 of 1993 and its Regulations).</p> <p>5.2. The contracted supplier performs all work and uses equipment on site complying with the provisions of the Occupational Health and Safety Act.</p> <p>5.3. To this end, the contracted supplier shall make available to NRF the valid letter of good conduct and shall ensure that its validity does not expire while executing this bid.</p> <p>5.4. The contracted supplier furnishes, upon signing of the SBD7, its registration number with the office of the Compensation Commissioner.</p> <p>5.5. The NRF undertakes to ensure that the contracted supplier in his capacity for the execution of this contract accepts liability to comply with the provisions of the said Act and the regulations promulgated in terms thereof.</p>
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14 PRICING DETAIL

SBD 3 - Pricing Schedule for the Duration of the Contract

(SBD 3.1 - Firm Unit Pricing)

NOTE

	Price quoted is fully inclusive of all costs including delivery to the specified NRF Business Unit geographical address and includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions, and skills development levies.
	In cases where different delivery points influence the pricing, a separate pricing schedule must be submitted for each delivery point
	A detailed catalogue of unit costs for all items required for each system, including: components (loggers & sensors), consumables, mounting equipment and all required items for systems correct operation; as well as spares available is required as per the request in Section 7, point 13 "Detailed catalogue lists"
	The NRF accepts no changes, extensions, or additional ad hoc costs to the pricing conditions of the contract once both parties have signed the contract.

NOTE APPLICABLE TO NON FIRM UNIT PRICING

	Non-firm prices that are subject to rate of exchange variations submitted for this bid are adjusted in terms of the section "PRICE ADJUSTMENTS: PRICES SUBJECT TO RATE OF EXCHANGE VARIATIONS".
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Where foreign exchange applies, and the bidders use different exchange rates, the NRF utilises a uniform rate to adjust the quoted prices to allow for fair comparison.

Where bidders set the foreign exchange percentage to 100%, the NRF requests clarification including the bidder is not located in South Africa and that the bidder pays all local costs i.e. importation clearing, local taxes, and local transport to sites from overseas.

NOTE QUANTITIES ARE VARIABLE DURING THE CONTRACT

Quantities are required as and when needed and the estimation quantity model as set out below applies

The quantities provided are the best forecast of budgeted minimum requirements during the contract.

The quantities provided are for quoting purposes only. This allows for price competition on an equal and fair comparison basis that is equitable to all bidders.

The NRF utilises the following quantity model to model the items that are not certain at time of the bid:

The minimum required number of systems (funding budget is currently available) with all listed components included in quoted price, will form the minimum contract value for the 5 year period.

Where the final purchase orders for these fall below the total quoted price (because some items will not be purchased for all systems), the balance value will be used for spares and contingencies over the 5 year period.

Project plan best estimate is as follows:

Year 1:

Purchase of

- 5 x automatic weather stations
- 11x "mini" weather stations
- 109 rain gauges
- Back up type 1 logger and sensor set for SYSTEM 1 (Components 1-9)

Year 2 (Est only – Revised estimate based on funding will be distributed)

- Replacement sensors & loggers (ad hoc)
- Spares and replacement components (ad hoc)

Year 3 (Est only – Revised estimate based on funding will be distributed)

- Additional stations **if budget becomes available**
- Spares and replacement components (ad hoc)

Year 4-5 (Est only – Revised estimate based on funding will be distributed)

- Additional stations **if budget becomes available**
- Replacement sensors and loggers (ad hoc)

BID PRICE IN RSA RAND (ALL APPLICABLE TAXES INCLUDED)

(WHERE FOREIGN EXCHANGE APPLIES, AND THE BIDDERS USE DIFFERENT EXCHANGE RATES, A UNIFORM RATE WILL BE USED BY THE NRF TO ADJUST THE QUOTED PRICES TO ALLOW FOR FAIR COMPARISON)

NB: The quantities provided are for quotation purposes only. This allows for price competition on an equal and fair comparison basis that is equitable to all bidders.

<u>NO</u>	<u>QTY</u> <u>EST</u>	<u>DESCRIPTION</u>	<u>UNIT OF</u> <u>MEASURE</u>	<u>UNIT PRICE of system</u>
1	5	Full Automatic Weather stations, (Inclusive of all components listed for SYSTEM1 (1-19) as per section 12	Per each	
2	11	High precision Wind –Rain and temperature- relative humidity- SWR sensor stations (Inclusive of all components listed for SYSTEM 2 (1-11) as per section 12	Per each	
3	109	High precision rain tipping bucket rain gauges (Inclusive of all components for SYSTEM 3 (1-3) as per section 12	Per each	
4	11	Operating systems for Systems 1 and 2 (SYSTEM 4)	Per each	
6	1	Back up logger and sensor set for system 1; SYSTEM 5 (1-9)	Per each	
7	1	Delivery to SAEON Arid Node	Per delivery	
8	1	Delivery to SAEON Grasslands Node	Per delivery	
9	1	Delivery to Ndlovu Node	Per delivery	
10	1	Delivery to SAEON Fynbos node	Per delivery	

Total Cost is determined by multiplying quantity by unit price

TOTAL COSTED VALUE OF ABOVE (represents minimum contract value)	R
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Delivery Administration

Required by Business Unit:	Items will need to be delivered the following addresses
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	<ol style="list-style-type: none"> 1) SAEON Arid Node 2) SAEON Grasslands Node 3) SAEON Ndlovu Node 4) SAEON Fynbos node
At delivery site:	<p>Ndlovu Node (Phalaborwa), Grasslands Node (PMB), Fynbos Node (Cape Town), Arid Node (Kimberly) FETEON sites</p> <ol style="list-style-type: none"> 1) SAEON Arid Node 97 Memorial Road, South Ridge, Kimberley (28.771943°S/ 24.751090°E), RSA 2) SAEON Grasslands Node 1 Peter Brown Drive, Queen Elisabeth Park, Montrose, KZN, RSA 3) SAEON Ndlovu Node Kruger National Park Gate, Hendrick van Eck Street, Phalaborwa, 1390, RSA 4) SAEON Fynbos node SAEON Fynbos Node, Room 2, G Floor, CBC Building, Kirstenbosch Botanical Gardens, Rhodes Drive, Newlands 7735, Cape Town, RSA
Period required for delivery upon placement of delivery instruction:	Five (5) weeks
Delivery	Not firm
Delivery basis	Full cost to delivery site
Brand and model, if not included in the proposal	N/A
Country of origin, if not included in the proposal	N/A

PRICE ADJUSTMENTS: PRICES SUBJECT TO RATE OF EXCHANGE VARIATIONS

Part 1:

Please furnish full particulars of your financial institution, state the currencies used in the conversion of the prices of the items to South African currency, which portion of the price is subject to rate of exchange variations, and the amounts remitted abroad.

PARTICULARS OF FINANCIAL INSTITUTION	ITEM NO	PRICE	CURRENCY	RATE	PORTION OF PRICE SUBJECT TO ROE	AMOUNT IN FOREIGN CURRENCY REMITTED ABROAD
				ZAR=		
				ZAR=		

Part 2:

Adjustments for rate of exchange variations during the contract period will be calculated by using the average monthly exchange rates as issued by your commercial bank for the periods indicated hereunder: (Proof from bank required)

AVERAGE MONTHLY EXCHANGE RATES FOR THE PERIOD:	DATE DOCUMENTATION MUST BE SUBMITTED TO THIS OFFICE	DATE FROM WHICH NEW CALCULATED PRICES WILL BECOME EFFECTIVE	DATE UNTIL WHICH NEW CALCULATED PRICE WILL BE EFFECTIVE
	Every 11 months from date of signing the contract or last revision of price	12 months from date of signing the contract	24 months from date of signing the contract and every 12 months thereafter
	Every 11 months from date of signing the contract or last revision of price	12 months from date of signing the contract	24 months from date of signing the contract and every 12 months thereafter

15 PREFERENCE POINTS CLAIMED (SBD 6.1)

NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS, AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2011.

In terms of Regulation 5 (2) and 6 (2) of the Preferential Procurement Regulations, preference points are awarded to a Bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

The following preference point systems are applicable to all bids:

the 80/20 system for requirements with a Rand value of up to R1 000 000 (all applicable taxes included); and

the 90/10 system for requirements with a Rand value above R1 000 000 (all applicable taxes included).

The value of this bid is **estimated to exceed** R 1 000 000 (all applicable taxes included) and therefore the preference point system below shall be applicable.

THE MAXIMUM POINTS FOR THIS BID ARE ALLOCATED AS FOLLOWS:	POINTS
PRICE	90
B-BBEE STATUS LEVEL OF CONTRIBUTION	10
Total points for Price and B-BBEE must not exceed	100

Preference Points for this bid is awarded in accordance with the table below:

BBEE Status Level of Contributor per B-BBEE Certificate	Preference Points Claimed
1	10
2	9
3	8

4	5
5	4
6	3
7	2
8	1
Non-Compliant	0

Failure on the part of a bidder to submit a B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS), or a Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA) or a sworn affidavit confirming annual turnover and level of black ownership in case of an EME and QSE together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

The purchaser reserves the right to require either before adjudicate the bid or at any time subsequently of the bidder to substantiate any claim to preferences in any manner required.

A bidder who qualifies as an EME in terms of the B-BBEE Act must submit a valid BBEE certificate (South African Companies) if available or a sworn affidavit (SAPS) confirming Annual Total Revenue and Level of Black Ownership or a Companies and Intellectual Property Commission (CIPC) certificate stipulating Annual Total Revenue and Level of Black Ownership. A copy of the template for this affidavit is available on the Department of Trade and Industry website https://www.thedti.gov.za/gazette/Affidavit_EME.pdf

A Bidder other than EME or QSE must submit their original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA or a Verification Agency accredited by SANAS.

A trust, consortium or joint venture, will qualify for points for their B-BBEE status level as a legal entity, if the entity submits their B-BBEE status level certificate.

A trust, consortium, or joint venture will qualify for points for their B-BBEE status level as an unincorporated entity, if the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate bid.

Tertiary Institutions and Public Entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.

A person will not be awarded points for B-BBEE status level if it is indicated in the bid documents that such a bidder intends sub-contracting more than 25% of the value of the contract to any other enterprise that does not qualify for at least the points that such a bidder qualifies for, unless the intended sub-contractor is an EME that has the capability and ability to execute the sub-contract.

A person awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.

BID DECLARATION: B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF THE ABOVE TABLE:	
B-BBEE Status level claimed	
Preference Points claimed	
BID DECLARATION: SUB-CONTRACTING	
Will any portion of the contract be sub-contracted?	YES / NO
If Yes, indicate:	
What percentage of the contract will be subcontracted?	
Names of the sub-contractor	
The B-BBEE status level of the sub-contractor	
Whether the sub-contractor is an EME?	YES / NO
<p>I/we, the undersigned, who is/are duly authorized to do on behalf of the company/firm, certify that the points claimed, based on the B-BBEE status level of contribution of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I/we acknowledge that:</p> <p>The information furnished is true and correct;</p> <p>The preference points claimed are in accordance with the Preferential Procurement Policy Framework Act and its Regulations;</p> <p>In the event of a contract being awarded as a result of points claimed as shown above, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;</p> <p>If the B-BBEE status level of contribution has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –</p> <p>Disqualify the Bidder from the bidding process;</p> <p>Recover costs, losses or damages it has incurred or suffered as a result of that Bidder's conduct;</p> <p>Cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;</p> <p>Restrict the Bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, from obtaining business from any NRF</p>	

for a period not exceeding ten (10) years, after the audi alteram partem (hear the other side) rule has been applied; and forward the matter for criminal prosecution; and

Forward the matter for criminal prosecution.

16 DUE DILIGENCE REQUIREMENTS

Written References from South African Revenue Services for either companies not registered in South Africa or do not have a local registered subsidiary

Bidders are required to provide evidence of good standing with their tax office (overseas and local).

Where the bidder is a South African citizen and meets the threshold for tax registration, the Central Supplier Database registration provided the verification of the bidder's tax status. Foreign bidders, where they have a South African legal registered entity, must comply with this requirement.

Where the foreign bidders do not have a South African legal entity, they are exempt from this requirement. For due diligence, where their country of residence has the same requirement of tax status, a copy of that certificate should be provided.

SBD 9: CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting this Bid in response to the invitation for the Bid made by the NRF, do hereby make the following statements that I certify to be true and complete in every respect:

I have read and I understand the contents of this Certificate;

I understand that the Bid will be disqualified if this Certificate is found not to be true and complete in every respect;

I am authorised by the Bidder to sign this Certificate, and to submit the Bid, on behalf of the Bidder;

Each person whose signature appears on the Bid has been authorised by the Bidder to determine the terms of, and to sign, the Bid on behalf of the Bidder;

For the purposes of this Certificate and the accompanying Bid, I understand that the word "competitor" shall include any individual or organisation, other than the Bidder, whether or not affiliated with the Bidder, who:

- a) Has been requested to submit a Bid in response to this Bid invitation;
- b) Could potentially submit a Bid in response to this Bid invitation, based on their qualifications, abilities or experience; and
- c) Provides the same goods and services as the Bidder and/or is in the same line of business as the Bidder

The Bidder has arrived at the accompanying Bid independently from, and without consultation, communication, agreement, or arrangement with any competitor. However, communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.

In particular, without limiting the generality of paragraphs above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:

- a) Prices;
- b) Geographical area where product or service will be rendered (market allocation);
- c) Methods, factors or formulas used to calculate prices;
- d) The intention or decision to submit or not to submit, a Bid;
- e) The submission of a Bid which does not meet the specifications and conditions of the Bid; or
- f) Bidding with the intention not to win the Bid.

In addition, there have been no consultations, communications, agreements, or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this Bid invitation relates.

The terms of this Bid have not been, and will not be, disclosed by the Bidder, directly or indirectly, to any competitor, prior to the date and time of the official Bid opening or of the awarding the bid or to the signing of the contract.

I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to Bids and contracts, Bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of Section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation

³ Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of

SBD 8 - DECLARATION OF BIDDER'S PAST SCM PRACTICES

Is the Bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector? If Yes, furnish particulars as an attached schedule:

YES / NO

Is the Bidder or any of its directors listed on the Register for Tender Defaulters in terms of Section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? If Yes, furnish particulars as an attached schedule:

YES / NO

Was the Bidder or any of its directors convicted by a court of law (including a court outside of the Republic of South Africa) for fraud or corruption during the past five years? If Yes, furnish particulars as an attached schedule:

YES / NO

Was any contract between the Bidder and any NRF terminated during the past five years because of failure to perform on or comply with the contract? If Yes,

YES / NO

furnish particulars as an attached schedule:

The Database of Restricted Suppliers and Register for Tender Defaulters resides on the National Treasury's website (www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.

SBD 4 - DECLARATION OF INTEREST WITH GOVERNMENT

Any legal person, including persons employed by the STATE ¹, or persons having a kinship with persons employed by the STATE, including a blood relationship, may make an offer or offers in terms of this invitation to Bid (includes an advertised competitive Bid, a limited Bid, a proposal or written price quotation). In view of possible allegations of favouritism, should the resulting Bid, or part thereof, be awarded to persons employed by the STATE, or to persons connected with or related to them, it is required that the Bidder or his/her authorised representative, declare his/her position in relation to the evaluating/adjudicating authority where:

The Bidder is employed by the STATE ; and/or

The legal person on whose behalf the Bidding Document is signed, has a relationship with persons/s person who is/are involved in the evaluation and or adjudication of the Bid(s), or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and/or adjudication of the Bid.

In order to give effect to the above, the following questionnaire must be completed and submitted with this Bid:

Full Name of Bidder or his/her representative

Identity Number:

Position occupied in the Company (director, trustee, shareholder, member):

Registration number of company, enterprise, close corporation, partnership agreement

Tax Reference Number:

VAT Registration Number:

The names of all directors/trustees/shareholders/members, their individual identity numbers, tax reference numbers and, if applicable, employee/PERSAL numbers must be indicated in a separate schedule including the following questions:

Schedule attached with the above details for all directors/members/shareholders

Are you or any person connected with the Bidder presently employed by the STATE ? If so, furnish the following particulars in an attached schedule	YES / NO				
<table border="1"> <tr> <td data-bbox="185 230 1525 315">Name of person/ director/ trustee/ shareholder/member:</td> </tr> <tr> <td data-bbox="185 315 1525 400">Name of STATE institution at which you or the person connected to the Bidder is employed</td> </tr> <tr> <td data-bbox="185 400 1525 486">Position occupied in the STATE institution</td> </tr> <tr> <td data-bbox="185 486 1525 562">Any other particulars:</td> </tr> </table>		Name of person/ director/ trustee/ shareholder/member:	Name of STATE institution at which you or the person connected to the Bidder is employed	Position occupied in the STATE institution	Any other particulars:
Name of person/ director/ trustee/ shareholder/member:					
Name of STATE institution at which you or the person connected to the Bidder is employed					
Position occupied in the STATE institution					
Any other particulars:					
If you are presently employed by the STATE, did you obtain the appropriate authority to undertake remunerative work outside employment in the public sector?	YES / NO				
<table border="1"> <tr> <td data-bbox="185 748 1525 833">If Yes, did you attach proof of such authority to the Bid document?</td> </tr> <tr> <td data-bbox="185 833 1525 916">If No, furnish reasons for non-submission of such proof as an attached schedule</td> </tr> <tr> <td data-bbox="185 916 1525 1050">(Note: Failure to submit proof of such authority, where applicable, may result in the disqualification of the Bid.)</td> </tr> </table>		If Yes, did you attach proof of such authority to the Bid document?	If No, furnish reasons for non-submission of such proof as an attached schedule	(Note: Failure to submit proof of such authority, where applicable, may result in the disqualification of the Bid.)	
If Yes, did you attach proof of such authority to the Bid document?					
If No, furnish reasons for non-submission of such proof as an attached schedule					
(Note: Failure to submit proof of such authority, where applicable, may result in the disqualification of the Bid.)					
Did you or your spouse or any of the company's directors/ trustees /shareholders /members or their spouses conduct business with the STATE in the previous twelve months?	YES / NO				
If so, furnish particulars as an attached schedule:					
Do you, or any person connected with the Bidder, have any relationship (family, friend, other) with a person employed by the STATE and who may be involved with the evaluation and or adjudication of this Bid?	YES / NO				
If so, furnish particulars as an attached schedule.					
Do you or any of the directors/ trustees/ shareholders/ members of the company have any interest in any other related companies whether or not they are bidding for this contract?	YES / NO				
If so, furnish particulars as an attached schedule:					

17 GENERAL CONDITIONS OF CONTRACT (With amendments to these as separate SPECIAL CONDITIONS)

In this document words in the singular also mean in the plural and vice versa, words in the masculine mean in the feminine and neuter, and words such as "will/should" mean "must".

The NRF cannot amend the National Treasury’s General Conditions of Contract (GCC). The NRF appends Special Conditions of Contract (SCC) providing specific information relevant to a GCC clause directly below the specific GCC clause and where the NRF requires a SCC that is not part of the GCC, the NRF appends the SCC clause after all the GCC clauses. No clause in this document shall be in conflict with another clause.

GCC1	<p>1. Definitions - The following terms shall be interpreted as indicated:</p>
	<p>1.1. “Closing time” means the date and hour specified in the bidding documents for the receipt of bids.</p> <p>1.2. “Contract” means the written agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.</p> <p>1.3. “Contract price” means the price payable to the supplier under the contract for the full and proper performance of his contractual obligations.</p> <p>1.4. “Corrupt practice” means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.</p> <p>1.5. "Countervailing duties" are imposed in cases where an enterprise abroad is subsidized by its government and encouraged to market its products internationally.</p> <p>1.6. “Country of origin” means the place where the goods were mined, grown, or produced or from which the services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.</p> <p>1.7. “Day” means calendar day.</p> <p>1.8. “Delivery” means delivery in compliance of the conditions of the contract or order.</p> <p>1.9. “Delivery ex stock” means immediate delivery directly from stock actually on hand.</p> <p>1.10. “Delivery into consignees store or to his site” means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the supplier bearing all risks and charges involved until the supplies are so delivered and a valid receipt is obtained.</p> <p>1.11. "Dumping" occurs when a private enterprise abroad market its goods on own initiative in the RSA at lower prices than that of the country of origin and which have the potential to harm the local industries in the RSA.</p> <p>1.12. "Force majeure" means an event beyond the control of the supplier and not involving the supplier’s fault or negligence and not foreseeable. Such events may include, but is not restricted to, acts of the purchaser in its sovereign capacity, wars, or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.</p> <p>1.13. “Fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any bidder, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the bidder of the benefits of free and open competition.</p> <p>1.14. “GCC” mean the General Conditions of Contract.</p> <p>1.15. “Goods” means all of the equipment, machinery, and/or other materials that the supplier is required to supply to the purchaser under the contract.</p> <p>1.16. “Imported content” means that portion of the bidding price represented by the cost of</p>

	<p>components, parts or materials which have been or are still to be imported (whether by the supplier or his subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African place of entry as well as transportation and handling charges to the factory in the Republic where the supplies covered by the bid will be manufactured.</p> <p>1.17. “Local content” means that portion of the bidding price, which is not included in the imported content provided that local manufacture does take place.</p> <p>1.18. “Manufacture” means the production of products in a factory using labour, materials, components, and machinery and includes other related value-adding activities.</p> <p>1.19. “Order” means an official written order issued for the supply of goods or works or the rendering of a service.</p> <p>1.20. “Project site,” where applicable, means the place indicated in bidding documents.</p> <p>1.21. “Purchaser” means the organization purchasing the goods.</p> <p>1.22. “Republic” means the Republic of South Africa.</p> <p>1.23. “SCC” means the Special Conditions of Contract.</p> <p>1.24. “Services” means those functional services ancillary to the supply of the goods, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training, catering, gardening, security, maintenance and other such obligations of the supplier covered under the contract.</p> <p>1.25. “Written” or “in writing” means handwritten in ink or any form of electronic or mechanical writing.</p>
GCC2	2. Application
	<p>2.1. These general conditions are applicable to all bids, contracts and orders including bids for functional and professional services, sales, hiring, letting and the granting or acquiring of rights, but excluding immovable property, unless otherwise indicated in the bidding documents.</p> <p>2.2. Where applicable, special conditions of contract are also laid down to, cover specific supplies, services or works.</p> <p>2.3. Where such special conditions of contract are in conflict with these general conditions, the special conditions shall apply.</p>
GCC3	3. General
	<p>3.1. Unless otherwise indicated in the bidding documents, the purchaser shall not be liable for any expense incurred in the preparation and submission of a bid. Where applicable a non-refundable fee for documents may be charged.</p> <p>3.2. With certain exceptions (National Treasury’s eTender website), invitations to bid are only published in the Government Tender Bulletin. The Government Tender Bulletin may be obtained directly from the Government Printer, Private Bag X85, Pretoria 0001, or accessed electronically from www.treasury.gov.za</p>
GCC4	4. Standards
	<p>4.1. The goods supplied shall conform to the standards mentioned in the bidding documents and specifications.</p>
GCC4	The standards specified in this bidding document are as follows: (SEE also Table 1 on Pg 50)

SCC	Type 1 data logger (For SYSTEM 1)	Must be a CR1000 or equivalent	
		Must have 16 single-ended / 8 differential (individually configured) analogue inputs with the option of increasing number of channels with a multiplexer	
		Must be programmable, suitable for running a full suite of automatic weather station sensors (i.e. compatible with all required sensors), with complex configurations	
		Must be suitable for extreme, dusty humid environments, with an operating range of -20 to +50 degrees Celsius or better	
		Have least 2 MB of flash for operating system with at least 4MB's of battery backed up SRAM and equipped with compact flash port for memory card slots for expanded storage potential	
		Equipped with watch dog timers to monitor the state of the processor	
		Data loggers shall allow bi-directional communication with a laptop via a serial 9 pin RS 232 port	
		The Data logger shall have the facility to interface with modems and radio transmission	
		Must be able to operate on 12 V DC power supply	
		Data logger clock, programme and memory must be supported by internal backup battery so that no data is lost due to power failure or battery	
		Resolution must be 0.33 μ V on differential measurement of range \pm 2.5 mV	
	Must come with a minimum of a 3 year manufacturer's warranty		
	Type 2 data logger (For SYSTEM 2)	Must be a CR200 or equivalent	
		Programmable logger with a minimum of 5 single ended analogue channels that can be individually configured as well as at least 2 pulse count channels and two control ports.	
		Pulse counters should be able to reach up to a maximum count rate of 100Hz or more	
		For analogue inputs the period averaging must have a frequency range of 0 to 150kHz or more	
		Must be compatible with wind, rain, Temperature and RH sensor as well as pressure transducer sensors (suitable for measures from SDI-12 sensors and 4 to 20 mA sensors)	
		The Data logger shall have the facility to interface with modems	
	Must come with a minimum of a one year manufacturer's warranty		
	Rain gauge (For SYSTEM 1,2 &3)	Must be a Texas TR-525 rain gauge or equivalent	
		Tipping bucket rain gauge compatible with type 1 and type 2 loggers as well as with independent event loggers (Not in this bid)	
		The rain gauge funnel orifice shall be at least 150 mm in diameter	
		Must be high precision, outputting at 0.254 mm increments or less, with an accuracy of 1% or better for up to 50mm per hour.	
		Must come with the option of a bird spike	
		Must come with a minimum of a 3 year manufacturer's warranty	
	Wind speed & anemometer (For SYSTEM 1 & 2)	Must be a model 03002 R. M. Young or equivalent	
		Must be compatible with type 1 and type 2 data loggers	
		The anemometer shall be of the three cup design with bearings that allow a threshold of 0.5m/s.	
		The wind velocity range must be 0-50 m/s or better for routine operations and must be able to survive wind gusts 60 m/s or more	
		The anemometer shall be accurate to the nearest 0.5 m/s	
		Must have a AC sine wave output and be compatible with the type 1 and type 2 data loggers	
		The wind vane shall have a 360 degree mechanical range with an accuracy of approximately 5 degrees or better	
		Vane shall output an analogue dc voltage proportional to the wind direction and operate using an excitation voltage supplied by the Data logger	
Must come pre calibrated and with a calibration certificate			
Field recalibration must be possible			
Must come with a minimum of a one year manufacturer's warranty			

Air temperature and relative humidity Air temperature	Must be a model CS215 or equivalent	
	Temperature and relative humidity sensors should be an integrated unit and supplied with a 6 plate radiation shield with appropriate mounting systems. It must also come with replacement filters and in field sensor element for periodic recalibration.	
	The unit must be compatible with the Type 1 and type 2 data loggers	
	The air temperature measurement range must be -35 to 65 Degrees C or more	
	Accuracy of the air temperature sensor should be ± 0.5 degrees C or better between 0-40 degrees C, with the maximum acceptable error outside of this range of less than 1 degree C	
	The air temperature sensor shall be able to measure at 0.01 degree Celsius resolution or better and able to respond to ambient changes in under 2.5 minutes	
	The relative humidity sensor shall be able to provide readings across the 0-100% range, with a maximum of 4% error across this range	
	The relative humidity sensor shall be able to measure at 0.03% resolution or better and respond to ambient changes in less than 30 seconds.	
	Must come with a minimum of a one year manufacturer's warranty	
	Must come pre calibrated and with a calibration certificate	
Barometer (For SYSTEM 1)	Must be a model CS106 manufactured by Vaisala or equivalent	
	Must be compatible with type 1 and type 2 data loggers	
	Operating temperature range of at least -40°C to 60 °C	
	The barometer should operate over a range from 500–1100 mb (hPa), with an accuracy at least or better than ± 0.3 - ± 0.6 mb (hPa) across a 0-40 degree Celsius temperature range and a precision of ± 0.03 mb (hPa) or better	
	The barometer shall have an accuracy of ± 0.6 mb (hPa) or better across the 0-40 degree Celsius temperature range and shall respond to ambient changes in <1 second.	
	Must have a linear signal output of between 0-2.5 Vdc and must be compatible with type 1 and type 2 data loggers	
	Must come pre calibrated and with a calibration certificate	
	Must come with a minimum of a 3 year manufacturer's warranty	
Radiation: Pyranometer (For SYSTEM 1)	Must be a CMP3 (Kipp &Zonen) or equivalent	
	The Pyranometer shall be of a thermopile sensor construction	
	The spectral range for measurement shall be 300 to 2800 nm or wider	
	Must be compatible with type 1 data loggers	
	Typical sensitivity should be approximately 10 $\mu\text{V}/\text{W}/\text{m}^2$	
	Shall come with a white sun shield, integrated levelling and a weatherproof connector, pre-wired with cable and must come with a mounting system and crossarm for mounting away from other obstructing surfaces	
	Must come with the option of a five year manufacturer's warranty	
	Must come pre calibrated and calibration data on sensitivity must be supplied	
Radiation: Ultraviolet sensor (For SYSTEM 1)	Must be a CUV5 UV Radiometer (Kipp &Zonen) or equivalent	
	The UV sensor shall be able to measure a combined UVA and UVB readings over a spectral range of 280-400 $\mu\text{mol}/\text{m}^2/\text{s}$ overall (or wider). The sensitivity (UV) shall be 300 - 500 $\mu\text{V}/\text{W}/\text{m}^2$	
	Maximum UV irradiance must be 0-400 W/m^2	
	Must come with optical filters and a photo diode , not requiring power to operate	
	Shall come with a water proof connector, levelling bubble and levelling feet as well as an appropriate mounting arm for attachment to the mast	
	The directional error (up to 80 °) should be < 5 %	
	Must be compatible with type 1 data loggers	

		Must come with the option of a 5 year manufacturer's warranty	
		Must come pre calibrated and calibration data on sensitivity must be supplied	
	Radiation: Short wave sensor (SYSTEM 2)	Must be compatible with type 2 loggers	
		Must have a Light Spectrum Waveband of at least 360 to 1120 nm or better	
		Must have a measurement range of at least 0 to 1750 W m-2	
		Accuracy must be $\pm 5\%$ for daily total radiation or better	
		Must be a Campbell Scientific model 109 temperature probe or equivalent	
	Grass Min sensor (SYSTEM 1)	shall be a temperature probe that can operate from -50-70 degrees Celsius and shall provide an accuracy of better than ± 1 degree Celsius	
		Must be compatible with type 1 and type 2 loggers	
		Must come with a minimum of a one year manufacturer's warranty	
	Leaf wetness sensor (For SYSTEM 1)	Must be a Decagon type leaf wetness sensor equivalent	
		Must be compatible with type 1 loggers	
		Must be able to detect trace amounts of water and ice on the sensor	
		Measurement time must be 10ms	
		Output range must be 250mV to 1500	
		Sensor must approximate the properties (thermal mass and radiative) of a leaf	
		Must not require painting or user calibration	
		Must come with a minimum of a one year manufacturer's warranty	
	All Sensors	Must be robust and suitable for long term deployment	
	Documentation	All sensors must have well documented user manuals freely available	
	Software	Must come with software and have regular firmware and software upgrades freely available	
	Web publishing & remote download functions	Systems 1 &2 must have the ability for publishing to a web server and also capable of remote download.	

GCC5	5. Use of contract documents and information
	<p>5.1. The supplier shall not, without the purchaser's prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the purchaser in connection therewith, to any person other than a person employed by the supplier in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only as far as may be necessary for purposes of such performance.</p> <p>5.2. The supplier shall not, without the purchaser's prior written consent, make use of any document or information mentioned in GCC clause 5.1 except for purposes of performing the contract.</p> <p>5.3. Any document, other than the contract itself mentioned in GCC clause 5.1 shall remain the property of the purchaser and shall be returned (all copies) to the purchaser on completion of the supplier's performance under the contract if so required by the purchaser.</p> <p>5.4. The supplier shall permit the purchaser to inspect the supplier's records relating to the performance of the supplier and to have them audited by auditors appointed by the purchaser, if so required by the purchaser.</p>
GCC6	6. Patent rights

	<p>6.1. The supplier shall indemnify the purchaser against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the goods or any part thereof by the purchaser.</p>
GCC7	7. Performance security
	<p>7.1. Within thirty days (30) of receipt of the notification of contract award, the successful bidder shall furnish to the purchaser the performance security of the amount specified in SCC.</p> <p>7.2. The proceeds of the performance security shall be payable to the purchaser as compensation for any loss resulting from the supplier's failure to complete his obligations under the contract.</p> <p>7.3. The performance security shall be denominated in the currency of the contract, or in a freely convertible currency acceptable to the purchaser and shall be in one of the following forms:</p> <p>7.3.1. bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the purchaser's country or abroad, acceptable to the purchaser, in the form provided in the bidding documents or another form acceptable to the purchaser; or</p> <p>7.3.2. a cashier's or certified cheque</p> <p>7.4. The performance security will be discharged by the purchaser and returned to the supplier not later than thirty (30) days following the date of completion of the supplier's performance obligations under the contract, including any warranty obligations, unless otherwise specified in SCC.</p>
GCC8	8. Inspections, tests and analyses
	<p>8.1. All pre-bidding testing will be for the account of the bidder.</p> <p>8.2. If it is a bid condition that supplies to be produced or services to be rendered should at any stage during production or execution or on completion be subject to inspection, the premises of the bidder or contractor shall be open, at all reasonable hours, for inspection by a representative of the Department or an organization acting on behalf of the Department.</p> <p>8.3. If there are no inspection requirements indicated in the bidding documents and no mention is made in the contract, but during the contract period, it is decided that inspections shall be carried out, the purchaser shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.</p> <p>8.4. If the inspections, tests and analyses referred to in clauses 8.2 and 8.3 show the supplies to be in accordance with the contract requirements, the cost of the inspections, tests and analyses shall be defrayed by the purchaser.</p> <p>8.5. Where the supplies or services referred to in clauses 8.2 and 8.3 do not comply with the contract requirements, irrespective of whether such supplies or services are accepted or not, the cost in connection with these inspections, tests, or analyses shall be defrayed by the supplier.</p> <p>8.6. Supplies and services which are referred to in clauses 8.2 and 8.3 and which do not comply with the contract requirements may be rejected.</p> <p>8.7. Any contract supplies may on or after delivery be inspected, tested or analysed and may be rejected if found not to comply with the requirements of the contract. Such rejected supplies shall be held at the cost and risk of the supplier who shall, when</p>

	<p>called upon, remove them immediately at his own cost and forthwith substitute them with supplies, which do comply with the requirements of the contract. Failing such removal the rejected supplies shall be returned at the suppliers cost and risk. Should the supplier fail to provide the substitute supplies forthwith, the purchaser may, without giving the supplier further opportunity to substitute the rejected supplies, purchase such supplies as may be necessary at the expense of the supplier.</p> <p>8.8. The provisions of clauses 8.4 to 8.7 shall not prejudice the right of the purchaser to cancel the contract on account of a breach of the conditions thereof, or to act in terms of Clause 23 of GCC.</p>
GCC9	9. Packing
	<p>9.1. The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing, case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.</p> <p>9.2. The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract, including additional requirements, if any, specified in SCC, and in any subsequent instructions ordered by the purchaser.</p>
GCC10	10. Delivery and Documentation
	<p>10.1. Delivery of the goods shall be made by the supplier in accordance with the terms specified in the contract. The details of shipping and/or other documents to be furnished by the supplier are specified in SCC.</p> <p>10.2. Documents to be submitted by the supplier are specified in SCC.</p>
GCC10 SCC	A delivery note stating the official order against which the delivery or service is being made must accompany all deliveries or services performed. Deliveries not complying with this are not accepted at the contractor's expense.
GCC10 SCC	The NRF is under no obligation to accept any quantity that is in excess of the ordered quantity.
GCC10 SCC	<p>The supplier provides the following documentation per delivery:</p> <ul style="list-style-type: none"> • Packing slip • Specification Sheets • Calibration certificates where applicable • Operating Instructions (link to soft copy acceptable) • Service Instructions (link to soft copy acceptable) • Maintenance Manual (link to soft copy acceptable) • Catalogue listing all parts available as spares to support the procured item • Third party manufacturer's warranties if applicable
GCC10 SCC	NRF representative verifies both delivery and performance prior to signing a certificate evidencing such performance.

GCC11	11. Insurance
	11.1. The goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in the SCC.
GCC12	12. Transportation
	12.1. Should a price other than an all-inclusive delivered price be required, this shall be specified in the SCC.
GCC13	13. Incidental services
	<p>13.1. The supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:</p> <ul style="list-style-type: none"> 13.1.1. performance or supervision of on-site assembly and/or commissioning of the supplied goods; 13.1.2. furnishing of tools required for assembly and/or maintenance of the supplied goods; 13.1.3. furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods; 13.1.4. performance or supervision or maintenance and/or repair of the supplied goods, for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warranty obligations under this contract; and 13.1.5. training of the purchaser's personnel, at the supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied goods. <p>13.2. Prices charged by the supplier for incidental services, if not included in the contract price for the goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the supplier for similar services.</p>
GCC13 SCC	<p>Additional services to those listed in clause GCC13.1 above incidental to this procurement are included including the following:</p> <ul style="list-style-type: none"> 13.3. Facilitating recalibration of sensors with manufacturers if required 13.4. Provision of incidental compatible components and sensors that might be required to compliment this array <ul style="list-style-type: none"> 13.4.1. as per the itemised list of components as requested in section 7 "Returnable documents", and corresponding approved pricing strategy of this contract 13.4.2. including but not limited to water level sensors compatible with type 1 and type 2 loggers.
GCC14	14. Spare parts
	14.1. As specified in SCC, the supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the supplier:

	<p>14.1.1. such parts as the purchaser may elect to purchase from the supplier, provided that this election shall not relieve the supplier of any warranty obligations under the contract; and</p> <p>14.1.2. in the event of termination of production of the spare parts:</p> <p>14.1.2.1. Advance notification to the purchaser of the pending termination, in sufficient time to permit the purchaser to procure needed requirements; and</p> <p>14.1.2.2. Following such termination, furnishing at no cost to the purchaser, the blueprints, drawings, and specifications of the spare parts, if requested.</p>
GCC14 SCC	<p>14.2. The contracted supplier provides the catalogue listing all spare parts, consumables and replacement components to keep the original equipment in optimal operational condition. This should include at least but not limited to:</p> <p>14.2.1. All component parts including replacement sensors and loggers, as per the bid requirement</p> <p>14.2.2. For RH Sensor: changeable element / replacement filter that allows on-site recalibration or equivalent</p> <p>14.2.3. For wind sentry: replacement potentiometer or equivalent</p>
GCC15	15. Warranty
	<p>15.1. The supplier warrants that the goods supplied under the contract are new, unused, of the most recent or current models and that they incorporate all recent improvements in design and materials unless provided otherwise in the contract. The supplier further warrants that all goods supplied under this contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the purchaser's specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.</p> <p>15.2. This warranty shall remain valid for twelve (12) months after the goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the contract, or for eighteen (18) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise in SCC.</p> <p>15.3. The purchaser shall promptly notify the supplier in writing of any claims arising under this warranty.</p> <p>15.4. Upon receipt of such notice, the supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the purchaser.</p> <p>15.5. If the supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expense and without prejudice to any other rights, which the purchaser may have against the supplier under the contract.</p>
SCC15	<p>Warranty for individual sensors applies</p> <p>Warranty effective from date of delivery/ registration</p> <p>Where supplier's warranties exceed the minimum stated in clause 15, these will apply.</p>

GCC16	16. Payment
	<p>16.1. The method and conditions of payment to be made to the supplier under this contract shall be specified in SCC.</p> <p>16.2. The supplier shall furnish the purchaser with an invoice accompanied by a copy of the delivery note and upon fulfilment of other obligations stipulated in the contract.</p> <p>16.3. Payments shall be made promptly by the purchaser, but in no case later than thirty (30) days after submission of an invoice or claim by the supplier.</p> <p>16.4. Payment will be made in Rand unless otherwise stipulated in SCC</p>
GCC16 SCC	<p>Method and conditions of payment are as follows:</p> <p>The NRF only accepts invoices supported by signed delivery documents in accordance with this contract as valid payment requests.</p> <p>The other party submits the above invoices to the appointed contract manager for submission to the respective finance unit.</p> <p>The NRF does not settle invoices for outstanding goods or services.</p>
GCC16 SCC	<p>Schedule of payments are as follows:</p> <p>Minimum number of systems required as per the bid scope will be purchased within 6 months of the contract being awarded. The exact quantities of component parts for these will be confirmed in orders.</p> <p>Spares, contingencies, component parts and additional “full” systems” will be variable over 5 years depending on need and additional budget allocations</p> <p>Best estimate of requirements</p> <p>Year 1:</p> <p>Purchase of</p> <ul style="list-style-type: none"> • 5 x automatic weather stations • 11x “mini” weather stations • 109 rain gauges • Back up type 1 logger and sensor set for SYSTEM 1 (Components 1-9) • Year 2 (Est only – Revised estimate based on funding will be distributed)Replacement sensors & loggers (ad hoc) • Spares and replacement components (ad hoc) <p>Year 3 (Est only – Revised estimate based on funding will be distributed)</p> <ul style="list-style-type: none"> • Additional stations if budget becomes available • Spares and replacement components (ad hoc)

	<p>Year 4-5 (Est only – Revised estimate based on funding will be distributed)</p> <ul style="list-style-type: none"> • Additional stations if budget becomes available • Replacement sensors and loggers (ad hoc)
GCC17	17. Prices
	17.1. Prices charged by the supplier for goods delivered and services performed under the contract shall not vary from the prices quoted by the supplier in his bid, with the exception of any price adjustments authorized in SCC or in the purchaser's request for bid validity extension, as the case may be.
GCC17 SCC	All adjustments to unit prices must be specified on the SBD3.2 and apply in accordance with the terms set in the SBD3.2. Applications for price adjustments must have the documentary evidence set for each adjustment in the SBD3.2 to support of any adjustment. Unit price adjustments will only apply once the NRF has approved in writing the application. Contract management verifies all cost adjustment applications prior to giving approval.
GCC18	18. Contract amendment
	18.1. No variation in or modification of the terms of the contract shall be made except by written amendment signed by the parties concerned.
GCC19	19. Assignment
	19.1. The supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the purchaser's prior written consent.
GCC20	20. Subcontract
	20.1. The supplier shall notify the purchaser in writing of all subcontracts awarded under this contract if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the supplier from any liability or obligation under the contract
GCC21	21. Delays in supplier's performance
	<p>21.1. Delivery of the goods and performance of services shall be made by the supplier in accordance with the time schedule prescribed by the purchaser in the contract.</p> <p>21.2. If at any time during performance of the contract, the supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the supplier shall promptly notify the purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the supplier's notice, the purchaser shall evaluate the situation and may at his discretion extend the supplier's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of contract.</p> <p>21.3. No provision in a contract shall be deemed to prohibit the obtaining of supplies or services from a national department, provincial department, or a local authority.</p>

	<p>21.4. The right is reserved to procure outside of the contract small quantities or to have minor essential services executed if an emergency arises, the supplier's point of supply is not situated at or near the place where the supplies are required, or the supplier's services are not readily available.</p> <p>21.5. Except as provided under GCC Clause 25, a delay by the supplier in the performance of its delivery obligations shall render the supplier liable to the imposition of penalties, pursuant to GCC Clause 22, unless an extension of time is agreed upon pursuant to GCC Clause 21.2 without the application of penalties.</p> <p>21.6. Upon any delay beyond the delivery period in the case of a supplies contract, the purchaser shall, without cancelling the contract, be entitled to purchase supplies of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the supplier's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the supplier.</p>								
GCC22	22. Penalties								
	<p>22.1. Subject to GCC Clause 25, if the supplier fails to deliver any or all of the goods or to perform the services within the period(s) specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services using the current prime interest rate calculated for each day of the delay until actual delivery or performance. The purchaser may also consider termination of the contract pursuant to GCC Clause 23.</p>								
GCC22 SSC	PENALTIES FOR NOT MEETING THE MINIMUM LEVELS SET OUT IN THE SERVICE PERFORMANCE LEVELS EARLIER IN THIS DOCUMENT								
	<table border="1"> <thead> <tr> <th>Service being Measured</th> <th>Penalty where below minimum</th> </tr> </thead> <tbody> <tr> <td>Late deliveries (more the 8 weeks)</td> <td>2% penalty on contract value</td> </tr> <tr> <td>Delivered equipment not matching the specification outlined in this document</td> <td>Replace items free of charge with those meeting specifications</td> </tr> <tr> <td>Individual sensors and loggers cannot be individually replaced if required.</td> <td>2% of contract value</td> </tr> </tbody> </table>	Service being Measured	Penalty where below minimum	Late deliveries (more the 8 weeks)	2% penalty on contract value	Delivered equipment not matching the specification outlined in this document	Replace items free of charge with those meeting specifications	Individual sensors and loggers cannot be individually replaced if required.	2% of contract value
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Delivered equipment not matching the specification outlined in this document	Replace items free of charge with those meeting specifications								
Individual sensors and loggers cannot be individually replaced if required.	2% of contract value								
GCC23	23. Termination for default								
	<p>23.1. The purchaser, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, may terminate this contract in whole or in part:</p> <p>23.1.1. if the supplier fails to deliver any or all of the goods within the period(s) specified in the contract, or within any extension thereof granted by the purchaser pursuant to GCC Clause 21.2;</p> <p>23.1.2. if the Supplier fails to perform any other obligation(s) under the contract; or</p> <p>23.1.3. if the supplier, in the judgment of the purchaser, has engaged in</p>								

	<p style="text-align: center;">corrupt or fraudulent practices in competing for or in executing the contract.</p> <p>23.2. In the event the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms and in such manner as it deems appropriate, goods, works or services similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar goods, works or services. However, the supplier shall continue performance of the contract to the extent not terminated.</p> <p>23.3. Where the purchaser terminates the contract in whole or in part, the purchaser may decide to impose a restriction penalty on the supplier by prohibiting such supplier from doing business with the public sector for a period not exceeding 10 years.</p> <p>23.4. If a purchaser intends imposing a restriction on a supplier or any person associated with the supplier, the supplier will be allowed a time period of not more than fourteen (14) days to provide reasons why the envisaged restriction should not be imposed. Should the supplier fail to respond within the stipulated fourteen (14) days the purchaser may regard the intended penalty as not objected against and may impose it on the supplier.</p> <p>23.5. Any restriction imposed on any person by the Accounting Officer / Authority will, at the discretion of the Accounting Officer / Authority, also be applicable to any other enterprise or any partner, manager, director or other person who wholly or partly exercises or exercised or may exercise control over the enterprise of the first-mentioned person, and with which enterprise or person the first-mentioned person, is or was in the opinion of the Accounting Officer / Authority actively associated.</p> <p>23.6. If a restriction is imposed, the purchaser must, within five (5) working days of such imposition, furnish the National Treasury, with the following information:</p> <p style="margin-left: 40px;">23.6.1. the name and address of the supplier and / or person restricted by the purchaser;</p> <p style="margin-left: 40px;">23.6.2. the date of commencement of the restriction</p> <p style="margin-left: 40px;">23.6.3. the period of restriction; and</p> <p style="margin-left: 40px;">23.6.4. the reasons for the restriction.</p> <p>These details will be loaded in the National Treasury's central database of suppliers or persons prohibited from doing business with the public sector.</p> <p>23.7. If a court of law convicts a person of an offence as contemplated in sections 12 or 13 of the Prevention and Combating of Corrupt Activities Act, No. 12 of 2004, the court may also rule that such person's name be endorsed on the Register for Tender Defaulters. When a person's name has been endorsed on the Register, the person will be prohibited from doing business with the public sector for a period not less than five years and not more than 10 years. The National Treasury is empowered to determine the period of restriction and each case will be dealt with on its own merits. According to section 32 of the Act the Register must be open to the public. The Register can be perused on the National Treasury website.</p>
GCC24	24. Anti-dumping and countervailing duties
	<p>24.1. When, after the date of bid, provisional payments are required, or anti-dumping or countervailing duties are imposed, or the amount of a provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidized import, the STATE is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a</p>

	<p>provisional payment is no longer required or any such anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favourable difference shall on demand be paid forthwith by the contractor to the STATE or the STATE may deduct such amounts from moneys (if any) which may otherwise be due to the contractor in regard to supplies or services which he delivered or rendered, or is to deliver or render in terms of the contract or any other contract or any other amount which may be due to him</p>
GCC25	25. Force Majeure
	<p>25.1. Notwithstanding the provisions of GCC Clauses 22 and 23, the supplier shall not be liable for forfeiture of its performance security, damages, or termination for default if and to the extent that his delay in performance or other failure to perform his obligations under the contract is the result of an event of force majeure.</p> <p>25.2. If a force majeure situation arises, the supplier shall promptly notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.</p>
GCC26	26. Termination for insolvency
	<p>26.1. The purchaser may at any time terminate the contract by giving written notice to the supplier if the supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the purchaser.</p>
GCC27	27. Settlement of disputes
	<p>27.1. If any dispute or difference of any kind whatsoever arises between the purchaser and the supplier in connection with or arising out of the contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.</p> <p>27.2. If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the purchaser or the supplier may give notice to the other party of his intention to commence with mediation. No mediation in respect of this matter may be commenced unless such notice is given to the other party.</p> <p>27.3. Should it not be possible to settle a dispute by means of mediation, it may be settled in a South African court of law.</p> <p>27.4. Mediation proceedings shall be conducted in accordance with the rules of procedure specified in the SCC.</p> <p>27.5. Notwithstanding any reference to mediation and/or court proceedings herein,</p> <p>27.5.1. the parties shall continue to perform their respective obligations under the contract unless they otherwise agree; and</p> <p>27.5.2. the purchaser shall pay the supplier any monies due the supplier.</p>
GCC28	28. Limitation of liability

	<p>28.1. Except in cases of criminal negligence or wilful misconduct, and in the case of infringement pursuant to Clause 6;</p> <p>28.1.1. the supplier shall not be liable to the purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the supplier to pay penalties and/or damages to the purchaser; and</p> <p>28.1.2. the aggregate liability of the supplier to the purchaser, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.</p>
GCC29	29. Governing language
	<p>29.1. The contract shall be written in English. All correspondence and other documents pertaining to the contract that is exchanged by the parties shall also be written in English.</p>
GCC30	30. Applicable law
	<p>30.1. The contract shall be interpreted in accordance with South African laws, unless otherwise specified in SCC.</p>
GCC31	31. Notices
	<p>31.1. Every written acceptance of a bid shall be posted to the supplier concerned by registered or certified mail and any other notice to him shall be posted by ordinary mail to the address furnished in his bid or to the address notified later by him in writing and such posting shall be deemed to be proper service of such notice</p> <p>31.2. The time mentioned in the contract documents for performing any act after such aforesaid notice has been given, shall be reckoned from the date of posting of such notice</p>
GCC32	32. Taxes and duties
	<p>32.1. A foreign supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the purchaser's country.</p> <p>32.2. A local supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted goods to the purchaser.</p> <p>32.3. No contract shall be concluded with any bidder whose tax matters are not in order. Prior to the award of a bid the Department must be in possession of a tax clearance certificate, submitted by the bidder. This certificate must be an original issued by the South African Revenue Services</p>
GCC33	33. National Industrial Participation Programme
	<p>33.1. The NIP Programme administered by the Department of Trade and Industry shall be applicable to all contracts that are subject to the NIP obligation.</p>
GCC34	34. Prohibition of restrictive practices

	<p>34.1. In terms of section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, an agreement between, or concerted practice by, firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if a bidder (s) is / are or a contractor(s) was / were involved in collusive bidding (or bid rigging).</p> <p>34.2. If a bidder(s) or contractor(s), based on reasonable grounds or evidence obtained by the purchaser, has / have engaged in the restrictive practice referred to above, the purchaser may refer the matter to the Competition Commission for investigation and possible imposition of administrative penalties as contemplated in the Competition Act No. 89 of 1998.</p> <p>34.1. If a bidder(s) or contractor(s), has / have been found guilty by the Competition Commission of the restrictive practice referred to above, the purchaser may, in addition and without prejudice to any other remedy provided for, invalidate the bid(s) for such item(s) offered, and / or terminate the contract in whole or part, and / or restrict the bidder(s) or contractor(s) from conducting business with the public sector for a period not exceeding ten (10) years and / or claim damages from the bidder(s) or contractor(s) concerned.</p>
BID SCC	<p>Third Party Warranty</p> <p>Where the contracted party sources goods or services from a third party, the contracted party warrants that all financial and supply arrangements are agreed between the contracted party and the third party.</p>
BID SCC	<p>Third Party Agreements</p> <p>No agreement between the contracted party and the third party is binding on the NRF.</p>
BID SCC	<p>Contracted Party Due Diligence</p> <p>The NRF reserves the right to conduct supply chain due diligence at any time during the contract period including site visits.</p>
BID SCC	<p>Copyright and Intellectual Property</p> <p>All background intellectual property shall be deemed to invest in and remain the sole property if the party that contributed it to this contract and/or disclosed the same to the NRF.</p> <p>The contracted supplier hereby grants the NRF a fully paid up, irrevocable, non-exclusive, and transferable licence to use its background intellectual property including the right to sub-licence to third parties in perpetuity and to the extent that shall reasonably be required by the NRF for the exploitation of the contract intellectual property and to enable the NRF to obtain the full benefit of the contract intellectual property.</p> <p>The parties agree that all right, title, and interest in the contract intellectual property rightly invests in the NRF and to give effect to the foregoing:</p> <ol style="list-style-type: none"> 1. The contracted supplier hereby assigns all rights, titles, and interests in and to the contract intellectual property that it may own to the NRF and the NRF hereby accepts such assignment, and 2. The contracted supplier undertakes to assign in writing to the NRF all contract

	<p>intellectual property and which may invest in the contracted supplier.</p> <p>3. The data collected, programs developed, all academic outputs emanating from the data collected and/or programs developed remain the sole property of the NRF and all intellectual property rights therein invests sole in the NRF.</p> <p>The contracted supplier shall ensure that the contract intellectual property is kept confidential and shall fulfil its confidentiality obligations as set out in this document.</p> <p>The contracted supplier shall assist the NRF in obtaining statutory protection for the contract intellectual property at the expense of the NRF wherever the NRF may choose to obtain such protection. The contracted party shall procure where necessary the signatures of its personnel for the assignment of the contract intellectual property to the NRF, or as the NRF may direct, and to support the NRF, or its nominee, in the prosecution and enforcement thereof in any country in the world.</p> <p>The contracted supplier hereby irrevocably appoints the NRF to be its true and lawful agent in its own name, to do such acts, deeds, and things and to execute deeds, documents and forms which the NRF, in its absolute discretion, requires in order to give effect to the terms of this clause.</p> <p>The rights and obligations set out in this clause shall service termination of this contract indefinitely.</p>
<p>BID SCC</p>	<p>Confidentiality</p> <p>The recipient of confidential information shall be careful and diligent do as not to cause any unauthorised disclosure or use of the confidential information, in particular, during its involvement with the NRF and after termination of its involvement with the NRF, the recipient shall not:</p> <ol style="list-style-type: none"> 1. Disclose the confidential information, directly or indirectly, to any person or entity, without the NRF's prior written consent. 2. Use, exploit or in any other manner whatsoever apply the confidential information for any other purpose whatsoever, other than for the execution of the contract and the delivery of the deliverables or 3. Copy, reproduce or otherwise publish confidentiality information except as strictly required for the execution of the contract. <p>The recipient shall ensure that any employees, agents, directors, contractors, service providers, and associates which may gain access to the confidential information are bound by agreement with the recipient, not to</p> <ol style="list-style-type: none"> 1. Disclose the confidential information to any third party, or 2. Use the confidential information otherwise than as may be strictly necessary for the execution of the contract, <p>Both during the term of their associations with the recipient and after termination of their respective associations with the recipient.</p> <p>The recipient shall take all such steps as may be reasonably necessary to prevent the confidential information from falling into the hands of any unauthorised third party.</p>

The undertakings set out in this clause shall not apply to confidential information, which the recipient is able to prove:

1. Was in the possession of the recipient prior to its involvement with the NRF;
2. Is now or hereafter comes into the public domain other than by breach of this contract by the recipient;
3. Was lawfully received by the recipient from a third party acting in good faith having a right of further disclosure and who do not derive the same directly or indirectly from the NRF, or
4. Was independently developed by the recipient prior to its involvement with the NRF; or
5. Is required by law to be disclosed by the recipient, but only to the extent of such order and the recipient shall inform the NRF of such requirement prior to any disclosure.

The recipient shall within one (1) month of receipt of a written request from the NRF to do so, return to the NRF all material embodiments, whether in documentary or electronic form. Of the confidential information including but not limited to:

1. All written disclosures received from the NRF;
2. All written transcripts of confidential information disclosed verbally by the NRF; and
3. All material embodiments of the contract intellectual property.

The recipient acknowledges that the confidential information is being made available solely for the execution of the contract and for no other purpose whatsoever and that the confidential information would not have been made available to the recipient, but for the obligations of confidentiality agreed to herein.

Except as expressly herein provided, this contract shall not be construed as granting or confirming, either expressly or impliedly any rights, licences or relationships by furnishing of confidential information by either party pursuant to this contract.

18 BID SUBMISSION CERTIFICATE FORM - (SBD 1)

I hereby undertake to supply all or any of the goods, works, and services described in this procurement invitation to the NRF in accordance with the requirements and specifications stipulated in this Bid Invitation document at the price/s quoted.

My offer remains binding upon me and open for acceptance by the NRF during the validity period indicated and calculated from the closing time of Bid Invitation.

The following documents are deemed to form and be read and construed as part of this offer / bid even where integrated in this document:

Invitation to Bid (SBD 1)	Specification(s) set out in this Bid Invitation inclusive of all completed templates as set out in the annexures thereto
Bidder's responses to this invitation as attached to this document	Pricing Schedule(s) (SBD3) including detailed schedules attached
	CSD / Tax clearance letter

	Declaration of Interest (SBD4);	Independent Price Determination (SBD 9)
	Preference (SBD 6.1) claims for Broad Based Black Economic Empowerment Status Level of Contribution in terms of the Preferential Procurement Regulations 2011 (SBD6.1) and the BBBEE certificate	
	Declaration of Bidder's past SCM practice (SBD 8)	Conditions of contract as set out in this document (GCC)
	NIPP Obligations (SBD 5) where applicable	Local Content Certification (SBD 6.2) where applicable

I confirm that I have satisfied myself as to the correctness and validity of my offer / bid in response to this Bid Invitation; that the price(s) and rate(s) quoted cover all the goods, works and services specified in the Bid Invitation; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.

I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me in terms of this Bid Invitation as the principal liable for the due fulfilment of the subsequent contract if awarded to me.

I declare that I have had no participation in any collusive practices with any Bidder or any other person regarding this or any other Bid.

I certify that the information furnished in these declarations (SBD4, SBD6.1, SBD 6.2 where applicable, SBD5, SBD8, SBD9) is correct and I accept that the NRF may reject the Bid or act against me should these declarations prove to be false.

I confirm that I am duly authorised to sign this offer/ bid response.

NAME (PRINT)	
CAPACITY	
SIGNATURE	
Witness 1	
NAME	
SIGNATURE	
Witness 2	
NAME	
SIGNATURE	
DATE	

ANNEXURE A: TEMPLATES FOR MANDATORY INFORMATION REQUIRED TO FACILITATE EVALUATION

TECHNICAL SPECIFICATIONS: INSTRUCTIONS AND TEMPLATE

As per specification 2: Table 1 lists the minimum specifications required. All specifications listed in Table 1 must be met in order to qualify for Stage 3 evaluation.

Please fill in the template below indicating with a X if your product fails the minimum specification or a ✓,if it meets minimum specification set.

NB: As per the mandatory returnable documents section, technical specifications sheets must also be provided. The bid evaluation committee will use these to evaluate to verify your responses to determine if your product meets the minimum specifications.

Table 1 Minimum Specifications required (stage 2 evaluation)

Bidder: _____		Meets (✓) /Does not Meet (X) Minimum Specifications
Minimum Technical Specifications required		✓ or X
NB technical specification sheets must be provided for us to verify your answer		
Type 1 data logger (For SYSTEM 1)	Must be a CR1000 or equivalent	
	Must have 16 single-ended / 8 differential (individually configured) analogue inputs with the option of increasing number of channels with a multiplexer	
	Must be programmable, suitable for running a full suite of automatic weather station sensors (i.e. compatible with all required sensors), with complex configurations	
	Must be suitable for extreme, dusty humid environments, with an operating range of -20 to +50 degrees Celsius or better	
	Have least 2 MB of flash for operating system with at least 4MB's of battery backed up SRAM and equipped with compact flash port for memory card slots for expanded storage potential	
	Equipped with watch dog timers to monitor the state of the processor	
	Data loggers shall allow bi-directional communication with a laptop via a serial 9 pin RS 232 port	
	The Data logger shall have the facility to interface with modems and radio transmission	
	Must be able to operate on 12 V DC power supply	
	Data logger clock, programme and memory must be supported by internal backup battery so that no data is lost due to power failure or battery	
	Resolution must be 0.33 µV on differential measurement of range ± 2.5 mV	
Must come with a minimum of a 3 year manufacturer's warranty		
Type 2 data logger (For SYSTEM 2)	Must be a CR200 or equivalent	
	Programmable logger with a minimum of 5 single ended analogue channels that can be individually configured as well as at least 2 pulse count channels and two control ports.	
	Pulse counters should be able to reach up to a maximum count rate of 100Hz or more	
	For analogue inputs the period averaging must have a frequency range of 0 to 150kHz or more	

	Must be compatible with wind, rain, Temperature and RH sensor as well as pressure transducer sensors (suitable for measures from SDI-12 sensors and 4 to 20 mA sensors)		
	The Data logger shall have the facility to interface with modems		
	Must come with a minimum of a one year manufacturer's warranty		
Rain gauge (For SYSTEM 1,2 &3)	Must be a Texas TR-525 rain gauge or equivalent		
	Tipping bucket rain gauge compatible with type 1 and type 2 loggers as well as with independent event loggers (Not in this bid)		
	The rain gauge funnel orifice shall be at least 150 mm in diameter		
	Must be high precision, outputting at 0.254 mm increments or less, with an accuracy of 1% or better for up to 50mm per hour.		
	Must come with the option of a bird spike		
	Must come with a minimum of a 3 year manufacturer's warranty		
Wind speed & anemometer (For SYSTEM 1 & 2)	Must be a model 03002 R. M. Young or equivalent		
	Must be compatible with type 1 and type 2 data loggers		
	The anemometer shall be of the three cup design with bearings that allow a threshold of 0.5m/s.		
	The wind velocity range must be 0-50 m/s or better for routine operations and must be able to survive wind gusts 60 m/s or more		
	The anemometer shall be accurate to the nearest 0.5 m/s		
	Must have a AC sine wave output and be compatible with the type 1 and type 2 data loggers		
	The wind vane shall have a 360 degree mechanical range with an accuracy of approximately 5 degrees or better		
	Vane shall output an analogue dc voltage proportional to the wind direction and operate using an excitation voltage supplied by the Data logger		
	Must come pre calibrated and with a calibration certificate		
	Field recalibration must be possible		
	Must come with a minimum of a one year manufacturer's warranty		
Air temperature and relative humidity Air temperature	Must be a model CS215 or equivalent		
	Temperature and relative humidity sensors should be an integrated unit and supplied with a 6 plate radiation shield with appropriate mounting systems. It must also come with replacement filters and in field sensor element for periodic recalibration.		
	The unit must be compatible with the Type 1 and type 2 data loggers		
	The air temperature measurement range must be -35 to 65 Degrees C or more		
	Accuracy of the air temperature sensor should be ± 0.5 degrees C or better between 0-40 degrees C, with the maximum acceptable error outside of this range of less than 1 degree C		
	The air temperature sensor shall be able to measure at 0.01 degree Celsius resolution or better and able to respond to ambient changes in under 2.5 minutes		
	The relative humidity sensor shall be able to provide readings across the 0-100% range, with a maximum of 4% error across this range		
	The relative humidity sensor shall be able to measure at 0.03% resolution or better and respond to ambient changes in less than 30 seconds.		
		Must come with a minimum of a one year manufacturer's warranty	
		Must come pre calibrated and with a calibration certificate	
Relative humidity sensors (SYSTEM 1&2)			
Barometer (For SYSTEM 1)	Must be a model CS106 manufactured by Vaisala or equivalent		
	Must be compatible with type 1 and type 2 data loggers		
	Operating temperature range of at least -40°C to 60 °C		

	The barometer should operate over a range from 500–1100 mb (hPa), with an accuracy at least or better than $\pm 0.3 - \pm 0.6$ mb (hPa) across a 0-40 degree Celsius temperature range and a precision of ± 0.03 mb (hPa) or better	
	The barometer shall have an accuracy of ± 0.6 mb (hPa) or better across the 0-40 degree Celsius temperature range and shall respond to ambient changes in <1 second.	
	Must have a linear signal output of between 0-2.5 Vdc and must be compatible with type 1 and type 2 data loggers	
	Must come pre calibrated and with a calibration certificate	
	Must come with a minimum of a 3 year manufacturer's warranty	
Radiation: Pyranometer (For SYSTEM 1)	Must be a CMP3 (Kipp &Zonen) or equivalent	
	The Pyranometer shall be of a thermopile sensor construction	
	The spectral range for measurement shall be 300 to 2800 nm or wider	
	Must be compatible with type 1 data loggers	
	Typical sensitivity should be approximately $10 \mu\text{V/W/m}^2$	
	Shall come with a white sun shield, integrated levelling and a weatherproof connector, pre-wired with cable and must come with a mounting system and crossarm for mounting away from other obstructing surfaces	
	Must come with the option of a five year manufacturer's warranty	
	Must come pre calibrated and calibration data on sensitivity must be supplied	
Radiation: Ultraviolet sensor (For SYSTEM 1)	Must be a CUV5 UV Radiometer (Kipp &Zonen) or equivalent	
	The UV sensor shall be able to measure a combined UVA and UVB readings over a spectral range of 280-400 $\mu\text{mol/m}^2/\text{s}$ overall (or wider). The sensitivity (UV) shall be 300 - 500 $\mu\text{V/W/m}^2$	
	Maximum UV irradiance must be 0-400 W/m^2	
	Must come with optical filters and a photo diode , not requiring power to operate	
	Shall come with a water proof connector, levelling bubble and levelling feet as well as an appropriate mounting arm for attachment to the mast	
	The directional error (up to 80 °) should be $< 5 \%$	
	Must be compatible with type 1 data loggers	
	Must come with the option of a 5 year manufacturer's warranty	
Must come pre calibrated and calibration data on sensitivity must be supplied		
Radiation: Short wave sensor (SYSTEM 2)	Must be compatible with type 2 loggers	
	Must have a Light Spectrum Waveband of at least 360 to 1120 nm or better	
	Must have a measurement range of at least 0 to 1750 W m^{-2}	
	Accuracy must be $\pm 5\%$ for daily total radiation or better	
	Must be a Campbell Scientific model 109 temperature probe or equivalent	
Grass Min sensor (SYSTEM 1)	shall be a temperature probe that can operate from -50-70 degrees Celsius and shall provide an accuracy of better than ± 1 degree Celsius	
	Must be compatible with type 1 and type 2 loggers	
	Must come with a minimum of a one year manufacturer's warranty	
Leaf wetness sensor (For SYSTEM 1)	Must be a Decagon type leaf wetness sensor equivalent	
	Must be compatible with type 1 loggers	
	Must be able to detect trace amounts of water and ice on the sensor	
	Measurement time must be 10ms	
	Output range must be 250mV to 1500	
	Sensor must approximate the properties (thermal mass and radiative) of a	

	leaf	
	Must not require painting or user calibration	
	Must come with a minimum of a one year manufacturer's warranty	
All Sensors	Must be robust and suitable for long term deployment	
Documentation	All sensors must have well documented user manuals freely available	
Software	Must come with software and have regular firmware and software upgrades freely available	
Web publishing & remote download functions	Systems 1 &2 must have the ability for publishing to a web server and also capable of remote download.	

REFERENCES LETTER TEMPLATE:

Bidder's Letterhead

We are submitting a bid for the contract described below. We appreciate your assistance and effort in completing on your letterhead the reference as set out below on your experience with us.

Referee Letterhead	<u>Referee Legal Name</u>		
<u>REFERENCE ON COMPANY xxxxx</u>			
Bid Number:			
Bid Description			
Supply of Metrological equipment for long term research and monitoring.			
Describe the service/work the above bidder provide to you below			
Criteria	Needs improvement	Meets requirements	Exceeds requirements
Professionalism			
Customer centricity			
Satisfaction with bidder			
Reliability			
Ability to provide replacement components for weather stations			

Spares Availability for weather station equipment			
Overall Impression			
No. of times used in past year			Would you use the provider again? YES/NO
Completed by:			
Signature:			
Company Name:			
Contact Telephone Number:			
Date:			
Company Stamp:			