

# Ministry of Climate Change, Environment and Energy

**Republic of Maldives** 

# TERMS OF REFERENCE (IULAN NO: (IUL)438-ENV/438/2024/238

# SUPPLY AND DELIVERY OF A DRONE SYSTEM

**Requesting for proposal (RFP) – Single Envelope** 

Issued on: 1<sup>st</sup> July 2024 Issued By: Enhancing National Development through Environmentally Resilient Islands (ENDhERI) Project – Project Management Unit

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## Section 1

# **Tender Sheet**

Reference	Tender	r Reference		
No:				
1	Tender Name: SUPPLY AND DELIVERY OF A DRONE SYSTEM			
2	Bid queries submission timeline and A	ddress:		
	Location: Ministry of Climate Change, I	Environment a	nd Energy	
	Date: 08/07/2024 (Monday)			
	<b>Time:</b> 12:00pm			
	Email: procurement@environment.gov.n	nv		
	CC: endheri@environment.gov.mv			
	<b>Telephone No: 3018300</b>			
5	<b>Bid Clarification Deadline and</b>	Date:	Time:	
	Address:	09/07/2024	12:00pm	
	<b>Location:</b> Ministry of Climate Change,	(Tuesday)		
	Environment and Energy			
6	Proposal submission deadline:	Date:		<b>Time:</b> 10:00am
	<b>Location:</b> Ministry of Climate Change,	16/07/2024		
	Environment and Energy - Reception	(Tuesday)		
7	Submission instruction			
	Proposals must be delivered in sealed en	velopes titled		
	"Do not Open Before 16 <sup>th</sup> July 2024, 10			
	DRONE SYSTEM" and the submitting	party's name	and address	5
	Late proposals will be rejected.			
8	Submission address			
	Procurement Section			
	Ministry of Climate Change, Environmen			
	Green Building, Handhuvaree Hingun, M	Iaafannu		
	Male', 20392, Republic of Maldives			
	Email: procurement@environment.gov.n	<u>nv</u>		
	Website: <u>www.environment.gov.mv</u>			

	Project name:_Enhancing National Development throug Islands (ENDhERI)	gh Environmentally Resilient
7	Bid Opening:	<b>Time:</b> 10:05am
	Proposals will be opened in the presence of the	Date: 16/07/2024 (Tuesday)
	proponents' representatives who choose to be present	
	at the address below at the time of proposal opening.	
8	<b>Evaluation Criteria on Annex 09</b>	
9	Bid Security amount:	
10	Performance Guarantee amount:	
Note:		

### Section 2

# **Instruction for Bidders**

A. General Information	on	
1. Introduction	1.1	This bid is opened to parties who can provide the goods/services mentioned in the tender sheet. The requirements of the goods/services have been detailed in the information sheet.
2. Eligible Bidders	2.1	This bid is opened to all the registered businesses.
	2.2	If any other parties except for the parties mentioned in 2.1 are eligible for proposing the bid it will be stated in the tender sheet.
3. Bid Document and signing	3.1	The bid must be complied as stated in the annex 1 along with the documents stated in the bidder's checklist as one whole document.
	3.2	Bids must be typed in English language in an easy-to-read font. Or if written by hand, it should be legible. All pages of the tender shall bear the signature and stamp of the tenderer or his designee. Each page of the tender shall also be numbered in order to indicate the number of pages.
	3.3	3.3.1 If a person other than the Managing Director signs the bid, a copy of the "Power of Attorney" stating that the person is authorized to sign the bid should be submitted.
		3.3.2 If a person other than the managing partner of the partnerships signs the bid, a copy of the power of attorney stating that the person is authorized to sign the bid shall be submitted.
		3.3.3 If any person other than the Chairman of the Cooperative Societies signs the bid, a copy of the

Power of Attorney stating that the person is authorized to sign the bid shall be submitted.

4.Number of Bids submitted	4.1	Each bidder may submit 1 (one) bid. If any bidder submits more than one bid, all bids submitted by that bidder will be cancelled.
5. Cost of preparing Bid	5.1	All expenses incurred in preparing and submitting the bid shall be borne by the bidder. The ministry shall not be responsible for any expenses incurred in this regard.
6. Other principles	6.1	If the bidder is a close relative of an employee who works in the Ministry of Climate Change, Environment and Energy or any Ministry under the Ministry of Climate Change, Environment and Energy the bidder must disclose it in Disclaimer of Conflict of Interest form in annex. If such information is not disclosed the tender will be canceled without further notice.

B. Documents relating to the bid

7. Sections of the	7.1	Documents related to bid are included in the list below and
tender book		in amendments.
		7.1.1 Bid Sheet (Section-1)
		7.1.2 Instructions to Bidders (Section-2)
		7.1.3 General and Special Provisions of the Agreement (Section-3
		7.1.4 Annex (Section 4)
		7.1.5 Works Related Information (Section–5)
8. Clarification of information regarding the bid	8.1	It is the responsibility of the Bidder to obtain any further information regarding the information contained in this Bid Book or in connection with this Bid.
	8.2	Amendments issued in accordance with Section 9.1 shall .form part of the Bid

9. Changes to the tender	9.1	If it is deemed necessary to make a change to the bid before the expiry of the bid opening period, an amendment (deduction/addition) can may be made.
10. Language used in the tender	10.1	The bidder shall prepare the bid in Dhivehi or English in accordance with the sample given with the bid.
C. Preparation of bids		
11. Money used in the bid	11.1	The bidder shall submit the bid price in Maldivian Currency (MVR).
12.Proposing the price	12.1	If it is a GST registered entity, the price should be inclusive of GST. The amount paid for GST should be clearly stated.
13.Duration	13.1	The deadline for work should be submitted in days including holidays except Friday.
	13.2	The period offered for the work shall be reasonable for the performance of the work.
	13.3	The expiry date of the bid shall be at least 120 days from the date of submission of the bid.
	13.4	If the bidder has given more time than the time given by the Ministry for the works specified in the bid, the bid will be rejected.
D. Submission of bids		
14. How to close the bid	14.1	The name, address and telephone number of the bidder shall be written on the outside of the envelope.
	14.2	Bids should be submitted in a sealed envelope addressed as per the bid sheet.
15. Deadline for submission of bids	15.1	The deadline for submission of bids for this work or service will be mentioned in the bid sheet.
16. Procedure for late bids	16.1	Bids submitted after the deadline will not be accepted.

- 16.2 Bids sent by email and fax will not be accepted.
- E. Bid opening and evaluation

17. Bid opening	17.1	If the date scheduled for opening of bids is fixed as a public holiday by the Government for any reason, the opening of bids will be held on the deadline specified in the bid sheet of the next official day.
	17.2	Any problem with the calculation of qualifying tenders will be corrected as follows.
	17.3	If the amount in the bid differs from the amount in Dhivehi, the correct amount shall be deemed to be the amount in Dhivehi.
18. Bid Evaluation	18.1	The Ministry reserves the right to reject bids if the required information and documents are not submitted in connection with the notice. The Ministry also reserves the right to reject incomplete bids after acceptance. The Ministry reserves the right to cancel bids if the prices offered are inadequate.
19. Determination of the bidder	19.1	The successful and unsuccessful bidders will be notified in writing. Following this notice, unsuccessful bidders shall be given 3 (three) days to submit a complaint relating to the bid. The reason for the unsuccessful bid shall be stated upon request by the complainant within this period.
	19.2	The contract with the successful bidder shall be signed after considering the submissions and answering the questions raised by the unsuccessful bidders within the period specified in 19.1.
20. Selection and notification of the successful bidder	20.1	The agreement shall be signed after addressing the complaints and the questions raised by the unsuccessful bidders that have been submitted within the period specified in Article 19.1.

21. Signing the	21.1	If the work is abandoned after signing the agreement or if
agreement		the work is not completed after signing the agreement, action
		will be taken as per Chapter 11 of the Public Finance
		Regulation.

- 21.2 If the agreement is not signed within the stipulated time frame as stipulated in Chapter 11 of the Public Finance Regulation, the decision to award this work will be canceled and action will be taken as mentioned in Chapter 11 of the Public Finance Regulation.
- 21.3 The amount stated in the bid sheet shall be submitted as performance guarantee.

#### F. securities to be Submitted

22. Bid Security	22.1	The bid security of the unsuccessful bidders will be returned
		to them within 7 (seven) days from the date of notification to
		the successful bidder.

- 22.2 If a bidder withdraws from the bid after the opening of the bid or if the successful bidder cancels the bid after receiving the certificate of success, the bid security submitted by the bidder will be forfeited to the State.
- 23. Advance and23.1If an advance is requested, the advance may be issued in<br/>accordance with the Public Finance Regulation.

#### guarantee

- 23.2 Advance will be issued if the total value of the procurement exceeds MVR 250,000 (Two Hundred and Fifty Thousand Rufiyaa)
- 23.3 If an advance is requested, the advance shall be requested within 45 (forty-five) days of taking over the work.
- 23.4 If the advance is requested for, a security or guarantee issued by a government recognized bank or financial institution

established in Maldives shall be submitted as advance payment guarantee. 23.5 Advance shall not exceed 15% (fifteen percent) of the total cost of the work. The advance payment will be deducted from bills submitted during work or service provision in proportion to the total value of the contract. 24. Performance 24.1 If the bid price is above MVR.500,000/-, the successful bidder shall submit as performance guarantee a security or guarantee guarantee issued by a Government recognized bank or financial institution established in Maldives for this project. 24.2 If the successful bidder does not submit the performance guarantee within the period given to him, the decision to award the work will be canceled and the bid security submitted by the bidder will be forfeited to the State. 25.Case filing and 25.1 As per the Public Finance Regulation 11.02 filing and case investigation investigating of complaints against irregularities in a tender shall be submitted under the finance regulation circular number 13-K/CIR/2018/01 annex 17 through form PR-14. 25.2 As mentioned in Rule 11.02 of the Public Finance Regulation, irregularities in a tender shall be submitted in PR-14 form "Bidder Complaint Form-First Stage" in annex 18 of Finance Circular No. 13-K/CIR/2018/01. 25.3 Upon submission of irregularities in a tender as per Rule 11.02 of the Public Finance Regulation, within 14 (fourteen) days from the date of filing of the complaint, the matter shall be decided and the decision shall be sent to the complainant in writing under circular number 13-K/CIR/2018/01 annex 19 reply shall be prepared and notified in the PR-14 form (Response of Procurement Officer to the Tender Issue). 26.Submitting for 26.1 In submitting to the Independent Review Committee for

administrative review of a tender as mentioned in Chapter

Independent Review

Committee for	11.02 of the Public Finance Regulation, the tender issue
reconsideration	shall be referred to in annex 21 of Public Finance Circular
	No. 13-K/CIR/2018/0 The complaint may be submitted to
	the Independent Review Committee through Form PR-1
	(Appeal stage).

#### Section 3

# General and special provisions of the agreement

27.Definitions	27.1	"Owner of the Work" means a place within the jurisdiction
		of the Ministry required to carry out the Work.
	27.2	"Contractor" means the person submitting the tender for the performance of the work.
	27.3	"Work" means the service or works described in the tender sheet.
	27.4	"Work Price" means the amount paid to the Contractor upon completion of the Work in accordance with the Agreement.
	27.5	"Agreement" means the agreement between the Employer and the Contractor regarding the work.
28. Exchange of documents	28.1	The parties to this Agreement shall give all notices to each other in connection with this Agreement, generally in the Dhivehi and English language, in writing.
	28.2	Documents sent from one party to the other shall be sent by hand or by registered post, or to the designated email address specified in the bid.
	28.3	If you wish to change the address in this Agreement, you must notify the other party in writing.
29. Assignment of work to a	29.1	No assignment under this Agreement may be assigned to
third party		another party.

30. Taking over of goods and	30.1	The date and time of delivery of the materials to the Ministry
services		shall be notified to the Work Wheeler before the materials
		are delivered to the Ministry.
	30.2	Once the materials are brought to the Ministry, the
		contractor (the Ministry) will take over the quantity of the
		materials.
	30.3	The owner of work will check that the goods/services have
		been received as per the agreement after the Ministry takes
		over. If the work is completed in accordance with the
		specification after checking the quality, the goods/services
		will be deemed to have been received in accordance with the
		agreement. The service/goods provided in violation of the
		agreement will be returned.
31.Contarct Duration	31.1	The goods/services shall be delivered within the period
		specified in the agreement
	31.2	In the event of an extension of the contractor's control or a
		natural event/disaster or manufacturing-related matter, the
		event/disaster or manufacturing-related event shall be
		submitted to the Contractor before the expiry of the deadline.
	31.3	Even if an extension is requested for any reason, the
		extension will be granted in accordance with the Finance
		Rules.
32. Penalty and cancellation of	32.1	If the work or services (excluding consultancy) are not
agreement		completed within the agreed period, liquidated damages will
0		be deducted in accordance with Article 10.65 of the
		Financial Rules.

	32.2	If the total value of the bid is below MVR.5,000,000/-, the
		deduction shall be equal to the total value multiplied by
		0.005 multiplied by the number of days exceeding the
		period.
		Liquidated Damages = CP*0.005*LD
		If the total value of the tender exceeds MVR. 5,000,000/-,
		the deduction shall be equal to the total value multiplied by
		0.0025 multiplied by the number of days overdue.
		Liquidated Damages = CP*0.0025*LD
		CP (Contact Price): Total contract value
		LD (Late Duration): days beyond the term of the contract
	32.3	If the Contractor is required to pay for the period of delay,
		the bill submitted by the Contractor shall be paid for the
		remaining amount after deducting the amount specified in
		the bill.
	32.4	The Ministry reserves the right to terminate the contract if
		the liquidated damages exceed 15% of the total cost of the work.
33. Termination of the	33.1	The Ministry reserves the right to cancel the contract in
Agreement		whole or in part if it is found that the work is not being
		carried out as specified in the contract.
	33.2	If the agreement is terminated for any reason, within 3
		working days, the details of the work completed and
		unfinished work shall be signed by both parties. A list of all
		the Contractor's items at the work site shall be taken within 3
		days. We cannot be held responsible for any problems with

any of these items after this period.

34. Other things 35. Taxes and other fees	34.1	If, after signing the Agreement, the parties become aware that any law or regulation of the Government conflicts with this Agreement or if such law or regulation is enacted, this Agreement shall not be null and void. If such a provision becomes incorporated into this Agreement, both parties agree to maintain this Agreement without termination, albeit by amending such provision. Taxes, customs duties, import license fees and any other fees payable in connection with this work shall be paid by the contractor.
<b>36. Modification of the agreement (Amendments)</b>	36.1	Any provision of this Agreement may be modified only by agreement signed between the parties.
37. The law applicable to the agreement	37.1	This Agreement shall be governed by, and enforced in accordance with, the laws and regulations of the Republic of Maldives.
38. Dispute	38.1	If any dispute arising out of this Agreement cannot be resolved by negotiation between the parties, the matter shall be submitted to a court of law in Maldives.
	38.2	Any deficiencies in this Agreement shall be resolved by negotiation between the parties. If not resolved, the case shall be referred to a court of law in Maldives.

#### Section 4

#### Annex 1 Documents and checklist to be submitted by the bidder

The following related documents shall be submitted for the bids to be considered sufficiently responsive.

Applicants should submit their proposals containing the following documents and applicable Technical Proposal – Standard Forms and Financial Proposal – Standard Forms under ANNEX 1.

#	Documents to be submitted	√/ x	Page No:		
	Technical Proposal				
1	Proposal submission form - (Annex 2) (signed by the owner of the entity or				
	person with power of attorney to sign)				
2	Cooperative Profile Sheet issued by the Ministry of Economic Development				
	Profile taken from website: www.business.egov.mv				
3	Tax Clearance Report				
4	Experience Letter				
5	Documentation of conflict or non-conflict of interest – (Annex 8)				
	Financial Proposal				
6	Financial Breakdown form – (Annex 3- Fin Form 1)				
7	Details of Financial situation (Annex 4 – Fin Form 2)				
8	Average Annual Turnover (Annex 5- Fin Form 3)				
9	Line of Credit Letter (Annex 6 – Fin Form 4)				
10	Current Contract Commitments / Work in Progress (Annex 7 -Fin Form 5)				
11	Financial statements of the business for the year 2023, 2022 and 2021				
12	Business entities that have not completed one year (from the date of business				
	registration to date of bid announcement) are required to submit the bank				
	statement of the business's bank account. (Bank statement should be from the				
	date of account opening to date of bid announcement)				

Note 01: If bidder fails to submit any of the above listed document, their proposal will not be considered for further evaluation.

Annex 2	nnex 2
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	Proposal Submission Form						
1.Bid	lder Information	1					
1.1	Name:						
1.2	Address:						
2. Pro	oject Informatio	n					
2.1	Project						
	Name:						
2.1	Tender No:						
3. Mi	nimum quantity	y, price and duration of the good	ls/ser	vices of	ffered		
Detai	1		P	Price	GST (89	6)	Total
Dura	tion:						
Warr	anty:						
Guarantee:							
4. Declaration:							
4.1	4.1 After due consideration of the information given for the provision of the above-						
	mentioned works/services and the provisions of the Agreement, I / We hereby tender						
for the provision of these works or services at the above-mentioned price.							
4.2 I / We agree to accept and comply with this tender for 120 days from the date of							
submission. If the owner requests to sign the agreement within this period, I agree to							
	sign the agree	ment and work in accordance wi	ith th	e agree	ment.		
5. On Behalf							
Nam	e:			Sig	nature	Ş	Stamp
Desig	gnation						
Date							

#### Annex 3

#### FIN FORM 1

#### **Financial Breakdown Form**

#### Date:

#### **Reference No:** (generated by the proponent)

No.	Description	Price/Unit (MVR)	Total
1			
2			
3			
4			
	Total:		
	<b>GST 8%</b>		
	Total with GST		

### The quotation is valid for 120 days from the date of bid opening.

Indicate the total cost with detail cost to be paid in Maldivian Rufiyaa (MVR).

Note: The total contract price should be quoted inclusive of Goods and Services Tax (GST) or any applicable axes as per the Tax Legislation and must be shown in the breakdown.

Authorized Signature and stamp

## Annex 4 <u>FIN FORM 2</u>

#### **Details of Financial Situation**

#### If the business has been registered for more than a year bidder must fill in this form

Financial Data for Pr	evious 3 Years [MVR Ed	quivalent]		
	Year 2023	Year 2022	Year 2021	

#### Information from Balance Sheet

Total Assets		
Total Liabilities		
Net Worth		
Current Assets		
Current Liabilities		
Working Capital		

#### Information from Income Statement

Total Revenues		
Profits Before		
Taxes		
Profits After Taxes		

- Attached are copies of financial statements (balance sheets including all related notes, and income statements) for the last three years, as indicated above, complying with the following conditions.
  - All such documents reflect the financial situation of the Bidder.
  - Historic financial statements must be complete, including all notes to the financial statements.
  - Historic financial statements must correspond to accounting periods

#### Annex 5

#### <u>FIN FORM 3</u> Average Annual Turnover

#### Each Bidder must fill in this form

Annual Turnover Data for the Last 3 Years			
Year	Amount	MVR	
i eai	Currency	Equivalent	
2023			
2022			
2021			
Average Annual Turnover			

The information supplied should be the Annual Turnover of the Bidder in terms of the amounts billed to clients for each year for contracts in progress or completed at the end of the period reported.

## Annex 6 <u>FIN FORM 4</u>

#### Line of Credit Letter

[letterhead of the Bank/Financing Institution]

[date]

**To:**[Name and address of the Contractor]

Dear,

You have requested {name of the bank/financing institution) to establish a line of credit for the purpose of executing {insert Name and identification of Project}.

We hereby undertake to establish a line of credit for the aforementioned purpose, in the amount of {insert amount}, effective upon receipt of evidence that you have been selected as successful bidder.

This line of credit will be valid through the duration of the contract awarded to you.

Authorized Signature:	
Name and Title of Signatory: _	
Name of Agency:	

## Annex 7 <u>FIN FORM 5</u> <u>Current Contract Commitments/Works in Progress</u>

Tenderers and each partner to a JV should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

No	Name of contract	Employer, contact address/tel/fax	Value of outstanding work (current MVR equiv)	Estimated completion date	Average monthly invoicing over last six months (MVR/month)
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					

# Annex 8 DISCLAIMER FOR CONFLICT OF INTEREST Each Applicant must fill in this form

	Each ripplicant mast		
Tender Name:	Click here to enter text.		
Advertisement No:	Click here to enter text.		
Advertisement Date:	Click here to enter text.		
I/We, the undersigned as the	bidder, submitting the tender in t	respect of call for captioned ter	ıder, confirm:
• that should I/We ha	ve any "close relative" or "close	e associate" working at Minist	ry of Climate Change, Environment
and Energy, I/We w	vill disclose that information with	this form. In this instance "clo	ose relative" and "close associate"
represents the mean	ning stated in Section 19 of Regul	ation Number: 2023/R-158 (Pı	ublic Finance Regulation);
• that I/We will disclo	ose any conflict of interest in con	nnection to the contract with t	his form. A conflict of interest may
arise in particular a shared interest;	as a result of economic interests,	political or national affinities,	or any other relevant connection or
•	m the at Ministry of Climate Clict		gy, without delay, of any situation
• that I/We have not n under the contract;	nade, and will not to make, any off	fer of any type whatsoever from	which an advantage can be derived
	ranted, sought, attempted to obta	in or accepted and will not grav	nt, seek, attempt to obtain, or accept
, i i i i i i i i i i i i i i i i i i i	· ·		n illegal or corrupt practice, either
directly or indirectly	y, as an incentive or reward relat	ing to the award of the contrac	ct;
• that I/We understan	d that the at Ministry of Climate	Change, Environment and Ene	ergy reserves the right to verify this
information and tha	tt I am/We are aware of the conse	quences which may derive from	n any false declaration in respect of
the information requ	uired by the awarding body as a c	condition of participation in th	e contract procedure.
□ YES, I/We have "close	relative" or "close associate"	" please find the Details belo	DW.
Name of the Staff(s):			
NID Card No.:			
Relationship with the Staf	f:		
<b>NO</b> , I/We do not have	<i>"close relative" or "close asso</i>	ociate"	
Details of the Bidder			
Name of the Bidder:		Stamp of the Bidding	

Date:

Signature of the Bidder:

Areas	Details	Points
Price	Lowest Offered Price/ Offered Price $\times 60$ (The lower the price, the more points.)	60
Experience	Points will be awarded based on the document of completion of the works given by the contractor in respect of these types of works done during the last 3 years (2023, 2022 & 2021) for more than MVR 200,000.00 Work-related documents shall be deemed to be the supply of aviation electronics or hardware's related to camera and drone systems. Submitted documents should state the cost of the work, the level of completion and the date of award and completion. 5 points will be awarded for each submission. The maximum score for this section is 20 points.	20
Duration	Shortest duration proposed / proposed duration $\times 20$ (The shorter the period, the more points.)	20

Annex 9 Criteria to be used for evaluation of bids

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# **FINANCIAL SITUATION EVALUATION**

To be eligible the financial statements of the bidding party must show, minimum annual turnover of **MVR 300,00.00**, for the year 2023,2022 and 2021. (Form FIN-1 Annual Turnover)

(or)

To be eligible the financial statements of the bidding party must show, Minimum value of **MVR 300,00.00**, for the year 2023,2022 and 2021– (Form FIN -2: Financial Situation)

(or)

Business entities that have not completed one year (from the date of business registration to date of bid announcement) are required to submit the bank statement of the business's bank account. (bank statement should be from the date of account opening to date of bid announcement). To be eligible the business's bank statement must show a credit balance of minimum MVR **300,00.00** 

(or)

If bidding party is unable to meet any of the above requirement they shall submit 'Line of Credit Letter' As per the template in fin form 4. Credit limit shall be no less than **MVR 300,000.00** – (Form Fin -4: Line of Credit Letter)

#### **PRIORITY TO MSME's**

#### Below MVR 2,500,000

Among bidders who pass the technical and financial evaluation, Micro, Small and Medium Enterprises (MSME's) will be assessed accordingly: The bidder with the highest ranking with a proposed price that doesn't exceed 15% of the price of the bidder with the overall highest ranking will be awarded.

Among bidders who pass the technical and financial evaluation if there is no bidder as described in (a), bidders who belong to the same island as the project is carried out will be assessed accordingly: The bidder with the highest ranking with a proposed price that doesn't exceed 10% of the price of the bidder with the overall highest ranking will be awarded.

Among bidders who pass the technical and financial evaluation if there is no bidder as described in (a) and (b), bidders who belong to the same atoll as the project is being carried out is checked and assessed accordingly: The bidder with the highest ranking with a proposed price that doesn't exceed 5% of the price of the bidder with the overall highest ranking will be awarded.

Among bidders who pass the technical and financial evaluation if there is no bidder as described in (a), (b) and (c), all Maldivian bidders will be checked and assessed accordingly. The bidder with the highest ranking with the lowest proposed price will be awarded

Among bidders who pass the technical and financial evaluation if there is no bidder as described in (a), (b), (c) and (d) all bidders will be assessed accordingly. The bidder with the highest ranking with the lowest proposed price will be awarded

#### **CRITERIA ON CLASSIFYING REGIONAL BASED BUSINESS**

a) Check the bidders permanent address, if the bidder is a sole proprietorship

b) Check the island to which the business is registered, if the bidder is not a sole proprietorship

c) The bidder will be considered as a business working in one certain area, as per (a) and (b) accordingly:

• If the bidder is a sole proprietorship, the bidder's registered permanent address as of 1st

January of the year the invitation for bid was issued will be considered OR

• If the business had been registered before the year in which the invitation for bid was issued,

the island to which the business was registered as of 1st January of the year the invitation for bid was issued will be considered

OR

If the business had been registered within the year in which the invitation for bid was issued, the island to which the business was first registered will be considered.

Section 5 Details of services/materials/work required

	Technical Specifications of a Drone
<u>Aircraft</u>	
Weight (with propellers, without accessories)	915 g
Max Takeoff Weight	1,050 g
Dimensions	Folded (without propellers): 221×96.3×90.3 mm (L×W×H) Unfolded (without propellers): 347.5×283×107.7 mm (L×W×H)
Diagonal Distance	380.1 mm
Max Ascent Speed	6 m/s (Normal Mode) 8 m/s (Sport Mode)
Max Descent Speed	6 m/s (Normal Mode) 6 m/s (Sport Mode)
Max Flight Speed (at sea level, no wind)	15 m/s (Normal Mode) Forward: 21 m/s, Side: 20 m/s, Backward: 19 m/s (Sport Mode)
Max Wind Speed Resistance	12 m/s
Max Take-off Altitude Above Sea Level	6000 m (without payload)
Max Flight Time (no wind)	45 mins
Max Hover Time (no wind)	38 mins
Max Flight Distance	32 km

Max Pitch Angle	30° (Normal Mode) 35° (Sport Mode)
Max Angular Velocity	200°/s
GNSS	GPS+Galileo+BeiDou+GLONASS (GLONASS is supported only when the RTK module is enabled)
Hovering Accuracy	Vertical: $\pm 0.1$ m (with Vision System); $\pm 0.5$ m (with GNSS); $\pm 0.1$ m (with RTK) Horizontal: $\pm 0.3$ m (with Vision System); $\pm 0.5$ m (with High-Precision Positioning System); $\pm 0.1$ m (with RTK)
Operating Temperature Range	-10° to 40° C (14° to 104° F)
Internal Storage	N/A
Motor Model	2008
Propeller Model	9453F Propellers
Beacon	Built into the aircraft
<u>Wide Camera</u>	
Sensor	4/3 CMOS, Effective pixels: 20 MP
Lens	FOV: 84° Format Equivalent: 24 mm Aperture: $f/2.8-f/11$ Focus: 1 m to $\infty$
ISO Range	100-6400
Shutter Speed	Electronic Shutter: 8-1/8000 s Mechanical Shutter: 8-1/2000 s
Max Image Size	5280×3956

Still Photography Modes	Single: 20 MP Timed: 20 MP JPEG: 0.7/1/2/3/5/7/10/15/20/30/60 s JPEG+RAW: 3/5/7/10/15/20/30/60 s Smart Low-light Shooting: 20 MP Panorama: 20 MP (raw image)
Video Resolution	H.264 4K: 3840×2160@30fps FHD: 1920×1080@30fps
Bitrate	4K: 130 Mbps FHD: 70 Mbps
Supported File Formats	exFAT
Photo Format	JPEG/DNG (RAW)
Video Format	MP4 (MPEG-4 AVC/H.264)

# **<u>Tele Camera</u>**

Sensor	1/2-inch CMOS, Effective pixels: 12 MP
Lens	FOV: $15^{\circ}$ Format Equivalent: 162 mm Aperture: f/4.4 Focus: 3 m to $\infty$
ISO Range	100-6400
Shutter Speed	Electronic Shutter: 8-1/8000 s
Max Image Size	4000×3000
Photo Format	JPEG
Video Format	MP4 (MPEG-4 AVC/H.264)
Still Photography Modes	Single: 12 MP Timed: 12 MP JPEG: 0.7/1/2/3/5/7/10/15/20/30/60 s Smart Low-light Shooting: 12 MP
Video Resolution	H.264

	4K: 3840×2160@30fps FHD: 1920×1080@30fps
Bitrate	4K: 130 Mbps FHD: 70 Mbps
Digital Zoom	8x (56x hybrid zoom)
<u>Thermal</u> Camera	
Thermal Imager	Uncooled VOx Microbolometer
Pixel Pitch	12 μm
Frame Rate	30 Hz
Lens	DFOV: $61^{\circ}$ Format Equivalent: 40 mm Aperture: f/1.0 Focus: 5 m to $\infty$
Noise Equivalent Temperature Difference (NETD)	≤50 mK@F1.0
Temperature Measurement Method	Spot Meter, Area Measurement
Temperature Measurement Range	-20° to 150° C (-4° to 302° F, High Gain Mode) 0° to 500° C (32° to 932° F, Low Gain Mode)
Palette	White Hot/Black Hot/Tint/Iron Red/Hot Iron/Arctic/Medical/Fulgurite/Rainbow 1/Rainbow 2
Photo Format	JPEG (8-bit) R-JPEG (16-bit)
Video Resolution	640×512@30fps
Bitrate	6 Mbps

Video Format	MP4 (MPEG-4 AVC/H.264)
Digital Zoom	28x
Infrared Wavelength	8-14 μm
Infrared Temperature Measurement Accuracy	$\pm 2^{\circ}$ C or $\pm 2\%$ (using the larger value)
<u>Gimbal</u>	
Stabilization	3-axis (tilt, roll, pan)
Mechanical Range	Tilt: -135° to 100° Roll: -45° to 45° Pan: -27° to 27°
Controllable Range	Tilt: -90° to 35° Pan: Not controllable
Max Control Speed (tilt)	100°/s
Angular Vibration Range	±0.007°
Sensing	
Туре	Omnidirectional binocular vision system, supplemented with an infrared sensor at the bottom of the aircraft.
Forward	Measurement Range: 0.5-20 m Detection Range: 0.5-200 m Effective Sensing Speed: Flight Speed ≤15 m/s FOV: Horizontal 90°, Vertical 103°
Backward	Measurement Range: 0.5-16 m Effective Sensing Speed: Flight Speed ≤12 m/s FOV: Horizontal 90°, Vertical 103°
Lateral	Measurement Range: 0.5-25 m

	Effective Sensing Speed: Flight Speed ≤15 m/s FOV: Horizontal 90°, Vertical 85°
Upward	Measurement Range: 0.2-10 m Effective Sensing Speed: Flight Speed ≤6 m/s FOV: Front and Back 100°, Left and Right 90°
Downward	Measurement Range: 0.3-18 m Effective Sensing Speed: Flight Speed ≤6 m/s FOV: Front and Back 130°, Left and Right 160°
Operating Environment	Forward, Backward, Lateral, and Upward: Surface with a clear pattern and adequate lighting (lux >15) Downward: Diffuse reflective surface with diffuse reflectivity>20% (e.g. walls, trees, people) and adequate lighting (lux >15)
<u>Video</u> <u>Transmission</u>	
Live View Quality	Remote Controller: 1080p/30fps
Operating Frequency	2.400-2.4835 GHz 5.725-5.850 GHz
Max Transmission Distance (unobstructed, free of interference)	FCC: 15 km CE: 8 km SRRC: 8 km MIC: 8 km
Max Transmission Distance (Obstructed)	Strong Interference (dense buildings, residential areas, etc.): 1.5-3 km (FCC/CE/SRRC/MIC) Medium Interference (suburban areas, city parks, etc.): 3-9 km (FCC), 3-6 km (CE/SRRC/MIC) Low Interference (open spaces, remote areas, etc.): 9-15 km (FCC), 6-8 km (CE/SRRC/MIC)
Max Download Speed	15 MB/s
Latency (depending on environmental conditions and mobile device)	Approx. 200 ms
Antenna	4 Antennas, 2T4R

Transmission Power (EIRP)	2.4 GHz: <33 dBm (FCC), <20 dBm (CE/SRRC/MIC) 5.8 GHz: <33 dBm (FCC), <30 dBm (SRRC), <14 dBm (CE)
<u>Remote</u> <u>Controller</u>	
Max Transmission Distance (unobstructed, free of interference)	FCC: 15 km CE/SRRC/MIC: 8 km
Video Transmission Operating Frequency	2.400-2.4835 GHz 5.725-5.850 GHz
Antenna	4 Antennas, 2T4R
Video Transmission Transmitter Power (EIRP)	2.4 GHz: <33 dBm (FCC), <20 dBm (CE/SRRC/MIC) 5.8 GHz: <33 dBm (FCC), <14 dBm (CE), <23 dBm (SRRC)
Wi-Fi Protocol	802.11 a/b/g/n/ac/ax Support 2×2 MIMO Wi-Fi
Wi-Fi Operating Frequency	2.400-2.4835 GHz 5.150-5.250 GHz 5.725-5.850 GHz
Wi-Fi Transmitter Power (EIRP)	2.4 GHz: <26 dBm (FCC), <20 dBm (CE/SRRC/MIC) 5.1 GHz: <26 dBm (FCC), <23 dBm (CE/SRRC/MIC) 5.8 GHz: <26 dBm (FCC/SRRC), <14 dBm (CE)
<b>Bluetooth Protocol</b>	Bluetooth 5.1
Bluetooth Operating Frequency	2.400-2.4835 GHz
Bluetooth Transmitter Power (EIRP)	< 10 dBm

Screen Resolution	1920×1080
Screen Size	5.5 inches
Screen	60 fps
Brightness	1,000 nits
Touchscreen Control	10-point multi-touch
Battery	Li-ion (5000 mAh @ 7.2 V)
Charging Type	Recommended to be charged with the included DJI USB-C Power Adapter (100W) or USB charger at 12 V or 15 V
<b>Rated Power</b>	12 W
Storage Capacity	Internal Storage (ROM): 64 GB Supports a microSD card for expanded capacity.
Charging Time	Approx. 1 hour 30 minutes (with the included DJI USB-C Power Adapter (100W) only charging the remote controller or a USB charger at 15 V) Approx. 2 hours (with a USB charger at 12 V) Approx. 2 hours 50 minutes (with the included DJI USB-C Power Adapter (100W) charging the aircraft and remote controller simultaneously)
Operating Time	Approx. 3 hours
Video Output Port	Mini-HDMI port
Operating Temperature Range	-10° to 40° C (14° to 104° F)
Storage Temperature	-30° to 60° C (-22° to 140° F) (within one month) -30° to 45° C (-22° to 113° F) (one to three months) -30° to 35° C (-22° to 95° F) (three to six months) -30° to 25° C (-22° to 77° F) (more than six months)
Charging Temperature	5° to 40° C (41° to 104° F)
GNSS	GPS+Galileo+GLONASS
Dimensions	Antennas folded and controller sticks unmounted: 183.27×137.41×47.6 mm (L×W×H)

	Antennas unfolded and controller sticks mounted: 183.27×203.35×59.84 mm (L×W×H)
Weight	Approx. 680 g
<u>Storage</u>	
Supported Memory Cards	Aircraft: U3/Class10/V30 or above is required. A list of recommended microSD cards can be found below.
Supported microSD Cards	Remote Controller:SanDisk Extreme PRO 64GB V30 A2 microSDXCSanDisk High Endurance 64GB V30 microSDXCSanDisk Extreme 128GB V30 A2 microSDXCSanDisk Extreme 256GB V30 A2 microSDXCSanDisk Extreme 512GB V30 A2 microSDXCLexar 667x 64GB V30 A2 microSDXCLexar High-Endurance 64GB V30 microSDXCLexar 667x 256GB V30 A2 microSDXCLexar 667x 256GB V30 A2 microSDXCLexar 512GB V30 A2 microSDXCLexar 512GB V30 A2 microSDXCSamsung EVO Plus 64GB V30 microSDXCSamsung EVO Plus 128GB V30 microSDXCSamsung EVO Plus 256GB V30 microSDXCSamsung EVO Plus 128GB V30 A2 microSDXCKingston Canvas Go! Plus 128GB V90 A1 microSDXCKingston Canvas React Plus 128GB V30 A2 microSDXCKingston Canvas Go! Plus 64GB V30 A2 microSDXCKingston Canvas Go! Plus 128GB V30 A2 microSDXCKingston Canvas Go! Plus 128GB V90 A1 microSDXCKingston Canvas Go! Plus 128GB V90 A1 microSDXCKingston Canvas React Plus 128GB V90 A2 microSDXC<
Drone Battery	

Capacity	5000 mAh
Standard Voltage	15.4 V
Max Charging Voltage	17.6 V
Туре	LiPo 4S
Chemical System	LiCoO2
Energy	77 Wh
Weight	335.5 g
Charging Temperature	5° to 40° C (41° to 104° F)
<u>Charger</u>	
Input	100-240 V (AC Power), 50-60 Hz, 2.5 A
<b>Output Power</b>	100 W
Output	Max. 100 W (total) When both ports are used, the maximum output power of each interface is 82 W, and the charger will dynamically allocate the output power of the two ports according to the load power
<u>Charging Hub</u>	
Input	USB-C: 5-20 V, 5.0 A
Output	Battery Port: 12-17.6 V, 8.0 A
<b>Rated Power</b>	100 W
Charging Type	Three batteries charged in sequence
Charging Temperature Range	5° to 40° C (41° to 104° F)

# **RTK Module**

Dimensions	50.2×40.2×66.2 mm (L×W×H)
Weight	24±2 g
Interface	USB-C
Power	Approx. 1.2 W
RTK Positioning Accuracy	RTK Fix: Horizontal: 1 cm + 1 ppm; Vertical: 1.5 cm + 1 ppm
<u>Speaker</u>	
Dimensions	114.1×82.0×54.7 mm (L×W×H)
Weight	85±2 g
Interface	USB-C
<b>Rated Power</b>	3 W
Max Volume	110 dB @ 1 m
Effective Broadcast Distance	100 m @ 70 dB
Bit Rate	16 Kbps/32 Kbps
Operating Temperature Range	-10° to 40° C (14° to 104° F)
<u>Accessories</u>	<ul> <li>Genuine Extra 2 Batteries</li> <li>Tripod for with RTK Module</li> <li>Case for RTK Module</li> <li>Case for Tripod and Pole</li> </ul>