

REQUEST FOR INFORMATION

1. The Indian Coast Guard (ICG), Ministry of Defence, Government of India, intends to procure **54 Ocean and 62 Nearshore booms (length-200 mtrs each) along with accessories for pollution response at sea.**
2. This Request for Information (RFI) consists of three parts as indicated below:-
 - (a) **Part-I.** The first part of the RFI incorporates operational characteristics and features that should be met by the equipment. Few important technical parameters of the proposed equipment are also mentioned.
 - (b) **Part-II.** The second part of the RFI states the methodology of seeking response of vendors. Submission of incomplete response format will render the vendor liable for rejection.

PART-I

3. **Intended Use of Equipment (Operational Requirements).**
The ocean boom alongwith accessories will be mounted onboard Offshore Petrol Vessels (OPVs) of ICG for responding to oil spills in the ocean for containment by different towing configuration. The nearshore booms will be deployed within the coastal areas with the aid of Fast Patrol Vessels (FPVs) or other vessels of opportunity.
4. **Important Technical Parameters.** As per RFI Questionnaire (Appendix C).
5. Vendors should confirm that following conditions are acceptable:-
 - (a) The solicitation of offers will be as per 'Single Stage -Two Bid System'. It would imply that a 'Request for Proposal' would be issued soliciting the technical and commercial offers together, but in two separate sealed envelopes. The validity of commercial offers would be at least 18 months from the last date of submission of offers.
 - (b) The technical offers would be evaluated by a Technical Evaluation Committee (TEC) to check its compliance with RFP.
 - (c) The equipment of all TEC cleared vendors would be put through a trial evaluation with ICG ships on a 'No Cost No Commitment' basis. A

staff evaluation would be carried out by ICG to analyse the result of field evaluation and shortlist the equipment.

(d) Amongst the vendors cleared by GS evaluation, a Contract Negotiations Committee would decide the lowest cost bidder (L1) and conclude the appropriate contract.

(e) Vendor would be bound to provide product support for time period specified in the RFP, which includes spares and maintenance tools/jigs/fixtures for field and component level repairs.

(f) The vendor would be required to accept the general conditions of contract given in the Standard Contract Document at Chapter VI of DAP.

(g) **Performance-cum-Warranty Bond.** Performance-cum-Warranty Bond both equal to **5%** value of the contract inclusive of taxes and duties is required to be submitted after signing of contract.

PART-II

6. Procedure for Response.

(a) Vendors must fill the form of response as given in **Appendix B**. Apart from filling details about company, details about the exact product meeting other generic technical specifications should also be carefully filled. Additional literature on the product can also be attached with the form.

(b) The filled form should be dispatched at under mentioned address:-

Address: The Director General
 {for Director (FE)}
 Directorate of Fisheries and Environment,
 Room No – 10,
 Coast Guard Headquarters,
 National Stadium Complex,
 Purana Quila Road,
 New Delhi – 110 001

Phone No: +91 11 2338 8668

Telefax: +91 11 2307 4131

Email: dte-fe@indiancoastguard.nic.in

(c) Last date of acceptance of filled form is **26 Aug 21**. The vendors short listed for issue of RFP would be intimated. An online interaction with vendors is planned at 1500 Hrs on 05 Aug 21. Vendors desirous for interaction may forward willingness by 1700 Hrs on 02 Aug 21 in e-mail id dte-fe@indiancoastguard.nic.in . Meeting ID and Password will be shared with desirous vendors.

7. The Government of India invites responses to this request only from Original Equipment Manufacturers (OEM)/ Government Sponsored Export Agencies (applicable in the case of countries where domestic laws do not permit direct export by OEMs). The end user of the equipment is the Indian Coast Guard.

8. This information is being issued with no financial commitment and the Ministry of Defence reserves the right to change or vary any part thereof at any stage. The Government of India also reserves the right to withdraw it should be so necessary at any stage. The acquisition process would be carried out under the provisions of DAP.

REQUEST FOR INFORMATION: PROCEDURE FOR RESPONSE**Request for Information for Procurement of 54 Ocean Booms and 62 Nearshore booms (length 200 mtrs each) along with accessories.**

1. The Indian Coast Guard (ICG) is planning to procure **54 Ocean Booms and 62 Near shore booms (length 200 mtrs each) along with accessories**. With the view to identify probable vendors who can undertake the said project, OEMs are requested to forward information on the product which they can offer. The parameters/ broad specifications of the item are mentioned in the questionnaire attached as per **Appendix C**. In addition the vendors are required to furnish details as per Proforma at **Appendix B**.
2. Apart from the information as per the Appendices the vendors may also forward technical details/product brochures/literature etc pertaining to the item in question.
3. The required information/ details may please be forwarded at the following address by **26 Aug 21:-**

(a) User Directorate

Address: The Director General
{for Director (FE)}
Directorate of Fisheries and Environment,
Room No – 10,
Coast Guard Headquarters,
National Stadium Complex,
Purana Quila Road,
New Delhi – 110 001

Phone No: +91 11 2338 8668

Telefax: +91 11 2307 4131

Email: dte-fe@indiancoastguard.nic.in

(b) ADG Acquisition Technical

Address: The ADG (Acquisition-Technical)
Marine and System
Defence Procurement Board
Room No – 05, D-2 Wing
Ministry of Defence
Sena Bhawan
New Delhi – 110 011

Phone No: +91 11 21411712

Telefax: +91 11 21411710

Email ID: tmms-modacq@navy.gov.in

VENDOR INFORMATION PROFORMA

1. Name of the Vendor/Company/Firm.

(Company profile including Share Holding pattern, in brief, to be attached)

2. Type (Tick the relevant category).

Original Equipment Manufacturer (OEM) Yes/No
Authorised Vendor of foreign Firm Yes/No(attach details,
if yes) Others (give specific details)

3. Contact Details.

Postal Address:

City: _____ State: _____
Pin Code: _____ Tele: _____
Fax: _____ URL/Web Site: _____
Email: _____

4. Local Branch/Liaison Office/Agent (if any).

Name & Address: _____
Pin code: _____ Tele: _____ Fax: _____
Email: _____

5. Financial Details. Category of Industry (Large/Medium/Small Scale): _____

6. Certification by Quality Assurance Organisation.

Name of Agency	Certification	Applicable from (Date & Year)	Valid till (Date & Year)

7. **Details of Registration.**

Agency	Registration No.	Validity (Date)	Equipment
GeM			
DGQA/DGAQA/DGNAI			
OFB			
DRDO			
Classification Society			
Any other Government Agency			

8. **Membership of FICCI/ASSOCHAM/CII or other Industrial Associations.**

Name of Organisation

Membership Number

9. **Equipment/product profile (to be submitted for each product separately)**

(a) Name of product: _____
(IDDM Capability be indicated against the product)
(Should be given category wise)

(b) Description (attach technical literature): _____

(c) Whether OEM or Integrator: _____

(d) Name and address of foreign collaborator (if any): _____

(e) Industrial Licence Number: _____

(f) Indigenous component of the product (in percentage):

(g) Status (in service/design & development stage):

(h) Production capacity per annum:

(j) Countries/agencies where equipment supplied earlier (give details of quantity supplied):

(k) Estimated price of the equipment _____

10. Alternatives for meeting the objectives of the equipment set forth in the RFI.

11. Any other relevant information:_____

12. **Declaration.** It is certified that the above information is true and any changes will be intimated at the earliest.

(Authorised Signatory)

REQUEST FOR INFORMATION: QUESTIONNAIRE

Ser	Specifications/Parameters	Reply
<u>Ocean Boom</u>		
1.	<u>Objective.</u> The aim is to obtain operational/Technical/ Financial details of Ocean Boom to be operated from Indian Coast Guard Offshore Patrol Vessels (OPVs).	
2.	<u>Introduction.</u> When there is oil spill at sea, measures are to be instituted for protection, preservation, prevention and control of marine pollution. The preferred method is to treat the spilled oil at sea itself or collect and recover the spilled oil before it spreads over a wider area. Physical recovery involves containment of spilled oil with various types of booms and recovery and use of recovery devices to recover oil in the open seas as well as in coastal waters. However, containment and recovery is dependent on the weather and sea state. Once the oil is spilled on the sea, it will float and spread, unless it is highly viscous and dense. Oil should be prevented from spreading in the first place by using booms.	
3.	<u>Operational Characteristics and Features.</u> Curtain booms with air inflatable facility will be required for embarking onboard ICG ships view its compactness for stowing onboard. These booms will be required to be deployed from OPVs for offshore use. These booms have an inflatable air chamber to provide buoyancy. The floatation chambers are to be fixed with non return valves. The floatation chambers are to be divided into 2-3 m sections. Ballast is provided by a chain that acts as tension member. The features of booms to be incorporated are:-	

	<p>(a) Freeboard to prevent or reduce splash over.</p> <p>(b) Subsurface skirt to prevent or reduce escape of oil under the boom.</p> <p>(c) Longitudinal tension member to withstand forces from winds, waves and currents.</p> <p>(d) Ballast to maintain the vertical aspect of the boom.</p>	
4.	<u>Use of Boom.</u> The boom will be used in deep offshore waters.	
5.	<u>Length of Boom.</u> Total length of boom 200 mtrs and each boom section shall be 50 m with ASTM F962 approved boom connectors.	
6.	<u>Total Height (deflated).</u> Total height of boom in deflated condition should be between 1500-1800 mm.	
7.	<u>Freeboard.</u> Freeboard of the boom should be between 550-850 mm to prevent or reduce splash over.	
8.	<u>Draught.</u> The draught of the subsurface skirt should be 900-1200 mm to prevent or reduce escape of oil under the boom.	
9.	<u>Buoyancy to Weight Ratio.</u> Minimum 10:1 to 15:1.	
10.	<u>Tensile Strength.</u> minimum 250N/mm	
11.	<u>Fabric.</u> Hot vulcanised Neoprene or similar strong and durable fabric complying with ASTM test standards (ASTM F751-19) that shall be able to withstand wear and tear, tensile stress, drag force etc. Resistance to abrasion, flex fatigue, hydrocarbons, weather, UV light, oil and shear stress. Weight of fabric - minimum 750g/m ² .	
12.	<u>Sea State.</u> Boom should be usable upto sea state 3 (beaufort scale 3) and wave height 2 mtrs.	

13.	<u>Floatation Method.</u> Air Inflatable through multiple chambers in each section. The floatation chambers should be fixed with non return valves.	
14.	<u>Weight of Boom.</u> Maximum 18.0 kg/m.	
15.	<p><u>Power Pack.</u> Suitable diesel engine with rated capacity and compatible to boom. Hydraulic motor with reduction gear box pump shall be integral to the boom reel or independently mounted on a steel frame fitted with wheels and collapsible handles for easy portability. The air inflator if integral shall be provided on boom reel or on power pack with suitable belt driven drive. It shall be provided with minimum 15 mtrs hydraulic hoses with quick release couplings to reel and power pack, if power pack not integral to boom reel. The control system for boom speed regulation shall be provided preferably on boom reels and alternatively on the boom power pack. Engine - low noise, diesel (air cooled) with electric and hand start mode. It shall be provided with automatic over-speed shutdown valve and exhaust spark arrestor. The power pack shall have multi tasking ability of powering hose reel for boom deployment as well skimmer and air inflator operation simultaneously/ independently. Variable speed controller to vary hydraulic oil pressure.</p> <p><u>Ease of transportability.</u> Strong points facilitating lifting with help of lifting slings and forklift points for easy storage and transportation.</p>	
16.	<u>Boom Reel.</u> Shall be heavy duty, hydraulic operated and designed to store, deploy and retrieve oil boom. Reel frame should be made of 'A' grade steel with minimum thickness 5mm. Fork lift pockets and 4 point lifting eyes and slings be attached for facilitating lifting for easy storage and transportation. The boom reel shall be able to withstand the marine environment.	

17.

Accessories.

(a) **Anchoring System.** The boom should be provided with complete anchoring system with pair of ASTM approved towing bridles, Towing strops, Towing line and navigation lights for marking and easy identification for night deployment (Indian Coast Guard to be written on marker buoys for visual identification).

(b) **Storage.** A suitable container for stowing boom Reel along with boom, Power pack with hoses (hydraulic and discharge) and air pack inflator with hoses. Fork lift points and strong points facilitating lifting with help of lifting slings for easy storage and transportation. Container shall have locking arrangements for Boom Reel, Power Pack and Air Pack inflator and Securing arrangements for hoses (hydraulic and discharge).

(c) **Lifting Slings.** Strong durable lifting slings (with approved load safety certification) to lift container, boom reel, power pack and accessories.

(d) **Jet Spray System.** Electric High pressure jet-spray portable washer 160 bar for boom washing. Heating system shall also be provided for heating water upto 70⁰ Centigrade for washing the boom.

(e) **Cover.** Heavy Duty Cover for Boom Reel, Power Pack and Air Pack inflator for protection from marine environment.

(f) **Spare and Repair Kit.** The kit shall include spares for emergency repair requirement for Boom, Boom Reel, Power Pack and Air Pack inflator along with tool kits.

(g) `INDIAN COAST GUARD' to be written in the centre of each Boom section length with florescent reflector fabric visual both during day and night.

	(h) Paint System. All accessories other than the boom to be painted with internationally accepted standard paint scheme.	
18.	Trial Evaluation. The vendor, during the process of bidding will be required to offer the equipment for Field Evaluation Trial (FET) in India onboard Coast Guard vessels. Only system qualified during the FET will be finally shortlisted for deciding lowest bidder.	
19.	Product Support. The vendors shall give at least 15 year product support. The equipment shall have a warranty of two years from date of acceptance by Coast Guard.	
20.	Repair and Maintenance Philosophy. The equipment shall have a warranty for two years from date of acceptance by the buyer. The boom and accessories are to be maintained for 10 Years through a comprehensive Annual Maintenance Contract (AMC). During AMC all consumable and spares will be supplied by the vendor.	
21.	<p>Product Certification.</p> <p>(a) Tensile strength certificate of fabric and Ballast membrane.</p> <p>(b) Mill Test Report (MTR) /Certified Mill Test Report for Aluminium/ Marine Grade Steel used in manufacturing of boom reel, connectors and container.</p> <p>(c) Ozone test certificate for fabric.</p> <p>(d) Brochure and technical specification sheet of equipment being offered.</p> <p>(e) Certificate of product support for period of minimum 15 years from date of completion of warranty period.</p> <p>(f) OEM certificate stating equipment being offered is manufactured by them at their facility.</p> <p>(g) The performance and capacity tests shall be class certified like Bureau Veritas, DNV,</p>	

	<p>Achilles JQS, LRS, IRS, BIS or equivalent. Performance shall include Buoyancy to Weight ratio test, boom effectiveness test, Deployment time and Safe towing speed. Certificate to be submitted along with equipment dispatch readiness report.</p> <p>The vendor shall also provide technical and operational manual.</p>	
22.	<p>The boom and its accessories shall comply with following ASTM standards:-</p> <p>(a) D 751-19 - Standard testing method for coated Fabrics</p> <p>(b) F 2682-07 (2018) - Standard Guide for determining the buoyancy to weight ration of oil spill containment Boom</p> <p>(c) F 1093-99(2018) - Standard Test methods for Tensile strength Characteristics of oil spill response boom</p> <p>(d) F 818-16 (2020) - Standard Terminology relating to spill response booms and barriers</p>	
23.	Any additional specific technical and operational parameters may be added by the vendor, if any.	
<u>Nearshore Boom</u>		
24.	<u>Objective.</u> The aim is to obtain operational/Technical/ Financial details of Nearshore Boom to be operated from Indian Coast Guard Fast Patrol Vessels (FPVs) and other Vessels of Opportunity.	
25.	<u>Introduction.</u> When there is oil spill at sea, measures are to be instituted for protection, preservation, prevention and control of marine pollution. The preferred method is to treat the spilled oil at sea itself or collect and recover the spilled oil before it spreads over a wider area. Physical recovery involves containment of spilled oil with various types of booms and recovery and use of recovery devices to recover oil in the open seas as well as in coastal waters.	

	<p>However, containment and recovery is dependent on the weather and sea state. Once the oil is spilled on the sea, it will float and spread, unless it is highly viscous and dense. Oil should be prevented from spreading in the first place by using booms.</p>	
26.	<p><u>Operational Characteristics and Features.</u> Curtain booms with air inflatable facility will be required for embarking onboard ICG ships and vessels of opportunity view its compactness for stowing onboard. These booms will be required to be deployed from FPVs or vessels of opportunity for nearshore use. These booms have an inflatable air chamber to provide buoyancy. The floatation chambers are to be fixed with non return valves. The floatation chambers are to be divided into 2-3 m sections. Ballast is provided by a chain that acts as tension member. The features of booms to be incorporated are:-</p> <p>(a) Freeboard to prevent or reduce splash over.</p> <p>(b) Subsurface skirt to prevent or reduce escape of oil under the boom.</p> <p>(c) Longitudinal tension member to withstand forces from winds, waves and currents.</p> <p>(d) Ballast to maintain the vertical aspect of the boom.</p>	
27.	<p><u>Use of Boom.</u> The boom will be used in Nearshore waters.</p>	
28.	<p><u>Length of Boom.</u> Total length of boom 200 mtrs and each boom section shall be 25m with ASTM F962 approved boom connectors.</p>	
29.	<p><u>Total Height (deflated).</u> Total height of boom in deflated condition should be between 900-1050 mm.</p>	
30.	<p><u>Freeboard.</u> Freeboard of the boom should be between 400-500 mm to prevent or reduce splash over.</p>	

31.	<u>Draught</u> . The draught of the subsurface skirt should be 500-650 mm to prevent or reduce escape of oil under the boom.	
32.	<u>Buoyancy to Weight Ratio</u> . Minimum 8:1 to 12:1.	
33.	<u>Tensile Strength</u> . Minimum 250N/mm	
34.	<u>Fabric</u> . Hot vulcanised Neoprene or similar strong and durable fabric complying with ASTM test standards (ASTM F751-19) that shall be able to withstand wear and tear, tensile stress, drag force etc. Resistance to abrasion, flex fatigue, hydrocarbons, weather, UV light, oil and shear stress. Weight of fabric - minimum 750g/m ² .	
35.	<u>Sea State</u> . Boom should be usable upto sea state 2 (beaufort scale 2).	
36.	<u>Floatation Method</u> . Air Inflatable through single point inflation in each section of 25m. The floatation chambers should be fixed with non return valves.	
37.	<u>Weight of Boom</u> . Maximum 18.0 kg/m.	
38.	<u>Power Pack</u> . Suitable diesel engine with rated capacity and compatible to boom. Hydraulic motor with reduction gear box pump shall be integral to the boom reel or independently mounted on a steel frame fitted with wheels and collapsible handles for easy portability. The air inflator if integral shall be provided on boom reel or on power pack with suitable belt driven drive. Shall be provided with min 15 mtrs hydraulic hoses with quick release couplings to reel and power pack, if power pack not integral to boom reel. The control system for boom speed regulation shall be provided preferably on boom reels and alternatively on the boom power pack. Engine - low noise, diesel (air cooled) with electric and hand start mode. Shall be provided with automatic over-speed shutdown valve and exhaust spark arrestor. The power pack shall	

	<p>have multi tasking ability of powering hose reel for boom deployment as well skimmer and air inflator operation simultaneously/ independently. Variable speed controller to vary hydraulic oil pressure.</p> <p><u>Ease of Transportability.</u> Strong points facilitating lifting with help of lifting slings and forklift points for easy storage and transportation.</p>	
39.	<p><u>Boom Reel.</u> Shall be heavy duty, hydraulic operated and designed to store, deploy and retrieve oil boom. Reel frame should be made of 'A' grade steel with minimum thickness 5mm. Fork lift pockets and 4 point lifting eyes and slings be attached for facilitating lifting for easy storage and transportation. The boom reel shall be able to withstand marine environment.</p>	
40.	<p><u>Accessories.</u></p> <p>(a) <u>Anchoring System.</u> The boom shall be provided with complete anchoring system with pair of ASTM approved towing bridles, Towing stops, Towing line and navigation lights for marking and easy identification for night deployment (Indian Coast Guard to be written on marker buoys for visual identification) as per the size and weight of nearshore boom.</p> <p>(b) <u>Connectors for Joining Booms.</u> A connector shall be provided for connecting 02 or more nearshore booms whilst deploying at sea by the inshore vessels/ Vessels of Opportunity as per the ASTM standards.</p> <p>(c) <u>Storage.</u> A suitable container for stowing boom reel along with boom, Power pack with hoses (hydraulic and discharge) and air pack inflator with hoses. Fork lift points and strong points facilitating lifting with help of lifting slings for easy storage and transportation. Container shall have Locking arrangements for Boom Reel, Power Pack and Air Pack inflator</p>	

	<p>and Securing arrangements for hoses (hydraulic and discharge).</p> <p>(d) <u>Lifting Slings</u>. Strong durable lifting slings (with approved load safety certification) to lift container, boom reel, power pack and accessories.</p> <p>(e) <u>Jet Spray System</u>. Electric High pressure jet-spray portable washer 160 bar for boom washing. Heating system shall also be provided for heating water upto 70⁰ Centigrade for washing the boom.</p> <p>(f) <u>Cover</u>. Heavy Duty Cover for Boom Reel, Power Pack and Air Pack inflator for protection from marine environment.</p> <p>(g) <u>Spares and Repair Kit</u>. The kit shall include spares for emergency repair requirement for Boom, Boom Reel, Power Pack and Air Pack inflator along with tool kits.</p> <p>(h) `INDIAN COAST GUARD' to be written in the centre of each Boom section length with florescent reflector fabric visual both during day and night.</p> <p>(j) <u>Paint System</u>. All accessories other than the boom to be painted with internationally accepted standard paint scheme.</p>	
41.	<p><u>Trial Evaluation</u>. The vendor, during the process of bidding will be required to offer the equipment for Field Evaluation Trial (FET) in India onboard Coast Guard vessels. Only system qualified during the FET will be finally shortlisted for deciding lowest bidder.</p>	
42.	<p><u>Product Support</u>. The vendors shall give at least 15 year product support. The equipment shall have a warranty of two years from date of acceptance by Coast Guard.</p>	
43.	<p><u>Repair and maintenance philosophy</u>. The equipment shall have a warranty for two years from date of acceptance by the buyer. The boom and accessories are to be maintained for</p>	

	10 Years through a comprehensive Annual Maintenance Contract (AMC). During AMC all consumable and spares will be supplied by the vendor.	
44.	<p><u>Product Certification.</u></p> <p>(a) Tensile strength certificate of fabric and Ballast membrane.</p> <p>(b) Mill Test Report (MTR) /Certified Mill Test Report for Aluminium/ Marine Grade Steel used in manufacturing of boom reel, connectors and container.</p> <p>(c) Ozone test certificate for fabric.</p> <p>(d) Brochure and technical specification sheet of equipment being offered.</p> <p>(e) Certificate of product support for period of minimum 15 years from date of completion of warranty period.</p> <p>(f) OEM certificate stating equipment being offered is manufactured by them at their facility.</p> <p>(g) The performance and capacity tests shall be class certified like Bureau Veritas, DNV, Achilles JQS, LRS, IRS, BIS or equivalent. Performance shall include Buoyancy to Weight ratio test, boom effectiveness test, Deployment time and Safe towing speed. Certificate to be submitted along with equipment dispatch readiness report.</p> <p>(h) The vendor shall also provide technical and operational manual.</p>	
45.	<p>The boom and its accessories shall comply with following ASTM standards:-</p> <p>(a) D 751-19 - Standard testing method for coated Fabrics</p> <p>(b) F 2682-07 (2018) - Standard Guide for determining the buoyancy to weight ration of oil spill containment Boom</p>	

	(c) F 1093-99(2018) - Standard Test methods for Tensile strength Characteristics of oil spill response boom (d) F 818-16 (2020) - Standard Terminology relating to spill response booms and barriers	
46.	Any additional specific technical and operational parameters may be added by the vendor, if any.	
47.	Vendor infrastructure profile	
48.	Orders in hand (a) For government agencies (b) For private agencies	
49.	Orders executed (a) For government agencies (b) For private agencies	
50.	Countries where the equipment has been supplied	
51.	Annual production capacity	
52.	Estimated price of the offered product	
53.	Applicable key technology	
54.	Any suggestion for enhanced performance	
55.	Financial information (a) Balance sheet last three financial years (year wise) (b) Profits made (c) Net worth (d) Debt/Equity ratio (e) Quick ratio (f) Attach copies of certified published annual report showing turnover and financial status in support of above information.	
56.	Willingness of Global manufacturers to enhance/achieve indigenisation i.a.w. para 5(d) of Chapter II of DAP 2020. Tentative indigenisation plan may also be enclosed.	
57.	Any other relevant information	