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Memorandum of Understanding

between

CSIR-National Institute of Oceanography, Goa, and

Institute of Wood Science and Technology, Bangalore.

This MEMORANDUM OF UNDERSTANDING [hereinafter MoU] is made and entered into on this day of 9th November 2011 between the Council of Scientific and Industrial Research [CSIR], Anusandhan Bhavan, 2 Rafi Marg, New Delhi 110 001 through the National Institute of Oceanography [hereinafter NIO], Dona Paula, Goa 403 004 and the Indian Council of Forestry Research and Education [ICFRE], an autonomous council of Ministry of Environment and Forests, P.O. New Forest, Dehra Dun 248 006 through the Institute of Wood Science and Technology [hereinafter IWST], Malleswaram Post, Bangalore 560 003 (who for the purpose of this MoU are hereinafter referred to as 'PARTIES').

WHEREAS, CSIR-NIO is involved in research, consultancy and training in all the disciplines of oceanography and allied fields at its headquarters and regional centres in India.

WHEREAS, IWST has the responsibility to undertake, aid, promote and co-ordinate research and its application in the areas of wood science and technology.

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AND WHEREAS, CSIR-NIO desires to implement a research project entitled "Ballast water management Program - India" in collaboration with IWST, Visakhapatnam and agrees to finance such activity to IWST with funding from Ministry of Shipping through DG Shipping.

WHEREAS, the IWST hereto has agreed to work on assessment of biofouling at Tuticorin, Chennai, Paradip, Kolkata and Haldia harbours under the ballast water management project, to be coordinated by CSIR-NIO with financial support from the Ministry of Shipping, through DG, Shipping as given herein under Article 4.1.

Article 1. **Objectives**

- Assessment of biofouling communities at Tuticorin, Chennai, Paradip, Kolkata and Haldia 1.1 harbours following active and passive sampling approach at monthly intervals for a period of four years at each of the-harbours.
- 1.2 Preparation of inventory of all the fouling organisms, including associated fauna, on spatial and temporal basis from all the harbours listed at 1.1 through active and passive sampling.
- To quantify biomass built up on monthly and cumulative panels. 1.3
- 1.4 To inventorise wood boring organisms during different times of the year.
- 1.5 To find out any new introductions to the bio-fouling complex.
- 1.6 Maintenance of voucher samples for reference.

Article 2. Duties and Responsibilities of Parties

2.1 **CSIR-NIO**

- 2.1.1 NIO will bear the cost of data collection at the five harbours in fulfillment of the objectives mentioned in Article 1.
- 2.1.2 Planning of survey design in consultation with IWST for sample collection.
- 2.1.3 Co-ordination of the activities and monitoring of progress and quality of work.

2.2 **IWST**

- 2.2.1 Exposure of test panels of standard size at all the harbours, as stated at 1.1.
- 2.2.2 Monthly inspection of the test panels for fouling and boring organisms.
- 2.2.3 Identification of foulers and wood borers colonizing the test panels.
- 2.2.4 Restrain from publicizing the project plan, work details and results or any new findings without prior permission of CSIR-NIO.
- 2.2.5 Restrain from sharing of any results or findings from these studies with other than CSIR-NIO.
- 2.2.6 To participate in general sampling [active sampling] programme with special reference to biofouling.
- 2.2.7 Preservation of different species as voucher specimens.
- 2.2.8 Data processing, computation and submission of reports from time to time.

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Bangalore

Article 3. Joint Duties

- 3.1 Participation in port biological baseline surveys (general survey) in all the harbours, as mentioned at 1.1.
- 3.2 Procurement of materials for field work.

Article 4. Finance

- 4.1 Directorate General of Shipping, Ministry of Shipping, and Government of India [hereinafter called DGS] has agreed to make available to CSIR-National Institute of Oceanography, Goa, the required financial assistance for initiation and coordination of the ballast water management programme at the five ports listed at 1.1.
- 4.2 The disbursement of funds by CSIR-NIO to IWST is subject to the sanction and remittance of appropriate amounts by DGS toward this project.
- 4.3 The total budget and the amount and number of installments payable to IWST, including the percentage or part payment for each of such installments, are given in the project document (Approved Proposal Annexure 1) annexed to this agreement. NIO will transfer the project fund (Rs. 43,38,400) in five installments on yearly basis, i.e., Rs. 10,81,300/- during the first year, Rs. 8,39,300/- during the second year, Rs. 8,92,100/- during third year, Rs. 8,92,100/- during fourth year and Rs. 6,33,600/- during the fifth year respectively, in accordance with clause 4.2 above.
- 4.4 IWST will submit Utilization Certificate after the end of each financial year to CSIR-NIO.
- 4.5 The unexpended funds, if any, shall be returned to NIO for onward transmission to DGS at the end of the project.
- 4.6 Audited finance report to be sent to NIO for onward transmission to DG, Shipping.

Article 5. Exchange of Information

5.1 The term "information" includes scientific or technical data, results and/or methods of investigation, and other information intended to be provided, exchanged or arising under the objectives identified under Article 1. The parties shall take all measures to protect the secrecy of and avoid disclosure and unauthorised use of the information which is confidential and outside the public domain.

Article 6. Exchange of Research Samples

6.1 Samples exchanged between the parties shall not be transferred to any third party for research and commercial purposes and that the unutilised portions of such samples shall be sent back to the coordinators identified under Article 10.

Article 7. Confidentiality

7.1 Each party shall hold in confidence and shall not divulge, disclose or communicate to any third party any confidential information of a written or oral nature, which is received by it from the other party without the consent/approval of the party concerned.

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- 7.2 The parties shall not use any of the confidential information, which is required to be held in confidence for any purpose other than the performance of their obligations under this understanding.
- 7.3 The term of confidentiality under this understanding shall be effective from the date of execution hereof and shall be valid for a term of five years during the period of this MoU.

Article 8. General Provisions

- 8.1 The institution organising an item of work shall have the nodal responsibility for arranging logistics and the conduct of such works.
- Any research publication and commercially exploitable innovation arising out of the work plan and objectives mentioned hereinabove shall be independently or jointly published or patented as appropriate, depending on the share of inputs for the particular activity with intimation to the funding agency to do so and approval from the Joint Research Committee constituted under Article 9.1.
- 8.3 For IWST, publications and patents that come beyond the tenure of this agreement, IWST shall seek the approval of CSIR-NIO, Goa before submission for peer-review or filing patent application as the case may be.
- 8.4 To explore the prospects for joint or independent supervision of doctoral thesis on research topics arising from this collaboration.
- 8.5 Nothing in this understanding is intended to affect other cooperation or collaboration between the parties.

Article 9. Joint Research Committee

9.1 The parties shall appoint, at their sole discretion, two members to the JRC, one each from CSIR-NIO and IWST. Replacement may be done at any time by notice to the other party. Initially the members shall be:

CSIR-NIO

: Dr. S. S. Sawant, Scientist- Sr. Principal Scientist

IWST

: Dr. M. Balaji, Scientist-Scientist In-charge

- 9.2 JRC shall conduct meetings once in a year or as may be required.
- 9.3 JRC shall be responsible, throughout the term herein, for reviewing the programme and revising it as necessary.

Article 10. Implementation

10.1 To manage the execution of this agreement, the parties designate the following scientists as coordinators.

CSIR-NIO

: Dr. A. C. Anil, Scientist- Chief Scientist

IWST

: Dr. M. Balaji, Scientist- Scientist In-charge

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Article 11. Entry into Effect and Termination

- 11.1 This MoU shall become effective on the date it is signed by the parties and shall be valid for five [5] years or till completion of the activity. It may be amended by mutual written agreement and may be terminated on valid and sufficient grounds by either of the parties upon one month's written notice to the other party.
- 11.2 All joint activities not completed at the expiration or termination of this agreement shall be continued until their completion under the terms of this understanding.

Article 12. Amendments

- 12.1 This MoU represents the entire understanding between the parties and supersedes any and all understandings either oral or written hitherto with respect to the subject matter of this understanding.
- No amendment or modification of the MoU shall be valid unless the same is made in writing by both the parties specifically stating the same to be an amendment of the MoU. The modifications/changes shall become part of the MoU and shall be effective from the date on which they are made/ executed, unless otherwise agreed to.

Article 13. Assignment

13.1 This MoU is based on the professional competence and expertise of each party and hence none of the parties shall transfer or assign this agreement or rights or obligations arising hereunder, either wholly or in part, to any third party.

Article 14. Non-exclusivity

14.1 The relationship of the parties under this understanding shall be non-exclusive and the parties are free to pursue other agreements or collaborations of any kind. However, when entering into a particular research agreement, the participants may agree to limit each party's right to collaborate with others on that subject.

Article 15. Arbitration

15.1 In the event of any dispute or difference between the parties hereto, such disputes or differences shall be resolved amicably by mutual consultation or through the good offices of empowered agencies of the Government of India. If such resolution is not possible, then, the unresolved dispute or differences shall be referred to arbitration of an arbitrator to be nominated by the Secretary, Department of Legal Affairs ("Law Secretary"), Government of India, in terms of the Office Memorandum No. 55/3/1/75-CF dated the 19th November, 1975 issued by the Cabinet Secretariat (Department of Cabinet Affairs) Government of India, as modified from time to time.

This MoU has been executed in two originals, one of which has been retained by CSIR-NIO and the other by IWST, each copy being an official version of the agreement and having equal legal validity.

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IN WITNESS WHEREOF, the parties have executed this MoU and represent that they approve, accept and agree to the terms contained herein.

For and on behalf of CSIR, through National Institute of Oceanography. Goa.

S. R. Shetyr Name: Dr Satish R. Shetye

Title : Director

Seal:

डॉ. सतीश रा. शेट्ये DR. SATISH R. SHETYE निदंशक / DIRECTOR राष्ट्रीय समुद्रविज्ञान संस्थान

National Institute of Oceanography दोना पावला, गावा Dona Paula, Goa 403 004

For and on behalf of ICFRE, through Institute of Wood Science and Technology, Bangalore.

Name: Pr S. C

Title : Director

एस.सी. जोज़ी, भा. व. से.

Seal:

S.C. JOSHI, IFS निदेशक / Director ः विज्ञान एवं प्रौद्योक्तिः of Wood Science & Technology बेगलर/Bangalore-560 003

in the presence

Name: Dr. S. S. Sawant

Title: Scientist

Address: NIO, DONA PAULA.

In the presence

M. And The Name: Dr. M. Balaji

Title: Sherker D

Address: IWST, BANGALORE.

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ANNEXURE - I

BUDGET ESTIMATE						
Item	Year-1	Year-2	Year-3	Year-4	Year-5	Total
Fellowship for Project Assistant	288000	288000	336000	336000	336000	1584000
Consumables	50000	50000	50000	50000	30000	230000
Travel	300000	300000	300000	300000	150000	1350000
Contingency	125000	125000	125000	125000	60000	560000
Equipment	220000	0	0	0	0	220000
Sub-total	983000	763000	811000	811000	576000	3944000
Institutional overheads (10%)	98300	76300	81100	81100	57600	394400
Grand Total	1081300	839300	892100	892100	633600	4338400

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