Bidding Document for Procurement of

HYDRO-METEOROLOGICAL WORKSTATION AND AUTOMATED PRODUCTION SYSTEM
(SUPPLY, INSTALLATION AND COMMISSIONING)

Contract ID No: PPCR/DHM/G/ICB - 45

Project:
Building Resilience to Climate Related Hazards

Purchaser:
BRCH Project / Department of Hydrology and Meteorology

Country:
Nepal

Issued on: 27 September 2017
Section I Instructions to Bidders

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A. General

1. Scope of Bid

1.1 In connection with the Invitation for Bids, specified in the Bid Data Sheet (BDS), the Purchaser, as specified in the BDS, issues these Bidding Documents for the supply of Goods and Related Services incidental thereto as specified in Section VII, Schedule of Requirements. The name, identification and number of lots (contracts) of this International Competitive Bidding (ICB) procurement are specified in the BDS.

1.2 Throughout these Bidding Documents:
   a. The term “in writing” means communicated in written form (e.g. By mail, e-mail, fax, telex) with proof of receipt;
   b. If the context so requires, “singular” means “plural” and vice versa; and
   c. “Day” means calendar day.

2. Source of Funds

2.1 The Borrower or Recipient (hereinafter called “Borrower”) specified in the BDS has applied for or received financing (hereinafter called “funds”) from the International Bank for Reconstruction and Development or the International Development Association (hereinafter called “the Bank”) in an amount specified in BDS, toward the project named in BDS. The Borrower intends to apply a portion of the funds to eligible payments under the contract for which these Bidding Documents are issued.

2.2 Payment by the Bank will be made only at the request of the Borrower and upon approval by the Bank in accordance with the terms and conditions of the Loan (or other financing) Agreement. The Loan (or other financing) Agreement prohibits a withdrawal from the Loan (or other financing) account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import, to the knowledge of the Bank, is prohibited by decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than the Borrower shall derive any rights from the Loan (or other financing) Agreement or have any claim to the proceeds of the Loan (or other financing).
3. **Corrupt and Fraudulent Practices**

3.1 The Bank requires compliance with its policy in regard to corrupt and fraudulent practices as set forth in Section VI.

3.2 In further pursuance of this policy, Bidders shall permit and shall cause its agents (where declared or not), sub-contractors, sub-consultants, service providers or suppliers and to permit the Bank to inspect all accounts, records and other documents relating to the submission of the application, records and other documents relating to the submission of the application, bid submission (in case prequalified), and contract performance (in the case of award), and to have them audited by auditors appointed by the Bank.

4. **Eligible Bidders**

4.1 A Bidder may be a firm that is a private entity, a government-owned entity—subject to ITB 4.5—or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution. **Unless specified in the BDS**, there is no limit on the number of members in a JV.

4.2 A Bidder shall not have a conflict of interest. Any Bidder found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest for the purpose of this bidding process, if the Bidder:

   a. Directly or indirectly controls, is controlled by or is under common control with another Bidder; or
   b. Receives or has received any direct or indirect subsidy from another Bidder; or
   c. Has the same legal representative as another Bidder; or
   d. Has a relationship with another Bidder, directly or through common third parties, that puts it in a position to influence the bid of another Bidder, or influence the decisions of the Purchaser regarding this bidding process; or
   e. Participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which such Bidder is involved.
However, this does not limit the inclusion of the same subcontractor in more than one bid; or

f. Any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the bid; or

g. Any of its affiliates has been hired (or is proposed to be hired) by the Purchaser or Borrower for the Contract implementation; or

h. Would be providing goods, works, or non-consulting services resulting from or directly related to consulting services for the preparation or implementation of the project specified in the BDS ITB 2.1 that it provided or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm; or

i. Has a close business or family relationship with a professional staff of the Borrower (or of the project implementing agency, or of a recipient of a part of the loan) who: (i) are directly or indirectly involved in the preparation of the bidding documents or specifications of the contract, and/or the bid evaluation process of such contract; or (ii) would be involved in the implementation or supervision of such contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the Bank throughout the procurement process and execution of the contract.

4.3 A Bidder may have the nationality of any country, subject to the restrictions pursuant to ITB 4.7. A Bidder shall be deemed to have the nationality of a country if the Bidder is constituted, incorporated or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion also shall apply to the determination of the nationality of proposed subcontractors or sub-consultants for any part of the Contract including related Services.

4.4 A Bidder that has been sanctioned by the Bank in accordance with the above ITB 3.1, including in accordance with the Bank’s Guidelines on Preventing and Combating Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants ("Anti-Corruption
Section I Instructions to Bidders

Guidelines”), shall be ineligible to be prequalified for, bid for, or be awarded a Bank-financed contract or benefit from a Bank-financed contract, financially or otherwise, during such period of time as the Bank shall have determined. The list of debarred firms and individuals is available at the electronic address specified in the BDS.

4.5 Bidders that are Government-owned enterprises or institutions in the Purchaser’s Country may participate only if they can establish that they (i) are legally and financially autonomous (ii) operate under commercial law, and (iii) are not dependent agencies of the Purchaser. To be eligible, a government-owned enterprise or institution shall establish to the Bank’s satisfaction, through all relevant documents, including its Charter and other information the Bank may request, that it: (i) is a legal entity separate from the government (ii) does not currently receive substantial subsidies or budget support; (iii) operates like any commercial enterprise, and, inter alia, is not obliged to pass on its surplus to the government, can acquire rights and liabilities, borrow funds and be liable for repayment of its debts, and can be declared bankrupt; and (iv) is not bidding for a contract to be awarded by the department or agency of the government which under their applicable laws or regulations is the reporting or supervisory authority of the enterprise or has the ability to exercise influence or control over the enterprise or institution.

4.6 A Bidder shall not be under suspension from bidding by the Purchaser as the result of the operation of a Bid–Securing Declaration.

4.7 Firms and individuals may be ineligible if so indicated in Section V and (a) as a matter of law or official regulations, the Borrower’s country prohibits commercial relations with that country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of goods or the contracting of works or services required; or (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower’s country prohibits any import of goods or contracting of works or services from that country, or any payments to any country, person, or entity in that country.

4.8 A Bidder shall provide such evidence of eligibility satisfactory to the Purchaser, as the Purchaser shall reasonably request.
5. Eligible Goods and Related Services

5.1 All the Goods and Related Services to be supplied under the Contract and financed by the Bank may have their origin in any country in accordance with Section V, Eligible Countries.

5.2 For purposes of this Clause, the term “goods” includes commodities, raw material, machinery, equipment, and industrial plants; and “related services” includes services such as insurance, installation, training, and initial maintenance.

5.3 The term “origin” means the country where the goods have been mined, grown, cultivated, produced, manufactured or processed; or, through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.

B. Contents of Bidding Document

6. Sections of Bidding Document

6.1 The Bidding Documents consist of Parts 1, 2, and 3, which include all the Sections indicated below, and should be read in conjunction with any Addenda issued in accordance with ITB 8.

PART 1 Bidding Procedures
- Section I. Instructions to Bidders (ITB)
- Section II. Bidding Data Sheet (BDS)
- Section III. Evaluation and Qualification Criteria
- Section IV. Bidding Forms
- Section V. Eligible Countries
- Section VI. Bank Policy-Corrupt and Fraudulent Practices

PART 2 Supply Requirements
- Section VII. Schedule of Requirements

PART 3 Contract
- Section VIII. General Conditions of Contract (GCC)
- Section IX. Special Conditions of Contract (SCC)
- Section X. Contract Forms

6.2 The Invitation for Bids issued by the Purchaser is not part of the Bidding Document.

6.3 Unless obtained directly from the Purchaser, the Purchaser is not responsible for the completeness of the document, responses to
requests for clarification, the Minutes of the pre-Bid meeting (if any), or Addenda to the Bidding Document in accordance with ITB 8. In case of any contradiction, documents obtained directly from the Purchaser shall prevail.

6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents and to furnish with its Bid all information or documentation as is required by the Bidding Documents.

7. Clarification of Bidding Documents

7.1 A Bidder requiring any clarification of the Bidding Document shall contact the Purchaser in writing at the Purchaser’s address specified in the BDS. The Purchaser will respond in writing to any request for clarification, provided that such request is received prior to the deadline for submission of bids within a period specified in the BDS. The Purchaser shall forward copies of its response to all Bidders who have acquired the Bidding Documents in accordance with ITB 6.3, including a description of the inquiry but without identifying its source. If so specified in the BDS, the Purchaser shall also promptly publish its response at the web page identified in the BDS. Should the clarification result in changes to the essential elements of the Bidding Documents, the Purchaser shall amend the Bidding Documents following the procedure under ITB 8 and ITB 22.2.

8. Amendment of Bidding Document

8.1 At any time prior to the deadline for submission of bids, the Purchaser may amend the Bidding Documents by issuing addenda.

8.2 Any addendum issued shall be part of the Bidding Documents and shall be communicated in writing to all who have obtained the Bidding Documents from the Purchaser in accordance with ITB 6.3. The Purchaser shall also promptly publish the addendum on the Purchaser’s web page in accordance with ITB 7.1.

8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Purchaser may, at its discretion, extend the deadline for the submission of bids, pursuant to ITB 22.2.

C. Preparation of Bids

9. Cost of Bidding

9.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Purchaser shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
10. **Language of Bid**  
10.1 The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser, shall be written in the language specified in the BDS. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages into the language specified in the BDS, in which case, for purposes of interpretation of the Bid, such translation shall govern.

11. **Documents Comprising the Bid**  
11.1 The Bid shall comprise the following:
   a. Letter of Bid in accordance with ITB 12;
   b. Completed schedules, in accordance with ITB 12 and 14;
   c. Bid Security or Bid-Securing Declaration, in accordance with ITB 19.1;
   d. Alternative bids, if permissible, in accordance with ITB 13;
   e. Written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 20.2;
   f. Documentary evidence in accordance with ITB 17 establishing the Bidder’s qualifications to perform the contract if its bid is accepted;
   g. Documentary evidence in accordance with ITB 17 establishing the Bidder’s eligibility to bid;
   h. Documentary evidence in accordance with ITB 16, that the Goods and Related Services to be supplied by the Bidder are of eligible origin;
   i. Documentary evidence in accordance with ITB 16 and 30, that the Goods and Related Services conform to the Bidding Documents;
   j. Any other document required in the BDS.

11.2 In addition to the requirements under ITB 11.1, bids submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all members and submitted with the bid, together with a copy of the proposed Agreement.

11.3 The Bidder shall furnish in the Letter of Bid information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid.
12. **Letter of Bid and Price Schedules**

12.1 The Letter of Bid and Price Schedules shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.2. All blank spaces shall be filled in with the information requested.

13. **Alternative Bids**

13.1 Unless otherwise specified in the BDS, alternative bids shall not be considered.

14. **Bid Prices and Discounts**

14.1 The prices and discounts quoted by the Bidder in the Letter of Bid and in the Price Schedules shall conform to the requirements specified below.

14.2 All lots (contracts) and items must be listed and priced separately in the Price Schedules.

14.3 The price to be quoted in the Letter of Bid in accordance with ITB 12.1 shall be the total price of the bid, excluding any discounts offered.

14.4 The Bidder shall quote any discounts and indicate the methodology for their application in the Letter of Bid, in accordance with ITB 12.1.

14.5 Prices quoted by the Bidder shall be fixed during the Bidder’s performance of the Contract and not subject to variation on any account, unless otherwise specified in the BDS. A bid submitted with an adjustable price quotation shall be treated as nonresponsive and shall be rejected, pursuant to ITB 29. However, if in accordance with the BDS, prices quoted by the Bidder shall be subject to adjustment during the performance of the Contract, a bid submitted with a fixed price quotation shall not be rejected, but the price adjustment shall be treated as zero.

14.6 If so specified in ITB 1.1, bids are being invited for individual lots (contracts) or for any combination of lots (packages). Unless otherwise specified in the BDS, prices quoted shall correspond to 100% of the items specified for each lot and to 100% of the quantities specified for each item of a lot. Bidders wishing to offer discounts for the award of more than one Contract shall specify in their bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITB 14.4 provided the bids for all lots (contracts) are opened at the same time.
14.7 The terms EXW, CIP, and other similar terms shall be governed by the rules prescribed in the current edition of Incoterms, published by The International Chamber of Commerce, as specified in the BDS.

14.8 Prices shall be quoted as specified in each Price Schedule included in Section IV, Bidding Forms. The dis-aggregation of price components is required solely for the purpose of facilitating the comparison of bids by the Purchaser. This shall not in any way limit the Purchaser’s right to contract on any of the terms offered. In quoting prices, the Bidder shall be free to use transportation through carriers registered in any eligible country, in accordance with Section V, Eligible Countries. Similarly, the Bidder may obtain insurance services from any eligible country in accordance with Section V, Eligible Countries. Prices shall be entered in the following manner:

a. For Goods manufactured in the Purchaser’s Country:
   (i) The price of the Goods quoted EXW (ex-works, ex-factory, ex warehouse, ex showroom, or off-the-shelf, as applicable), including all customs duties and sales and other taxes already paid or payable on the components and raw material used in the manufacture or assembly of the Goods;
   (ii) Any Purchaser’s Country sales tax and other taxes which will be payable on the Goods if the contract is awarded to the Bidder; and
   (iii) The price for inland transportation, insurance, and other local services required to convey the Goods to their final destination (Project Site) specified in the BDS.

b. For Goods manufactured outside the Purchaser’s Country, to be imported:
   (i) The price of the Goods, quoted CIP named place of destination, in the Purchaser’s Country, as specified in the BDS;
   (ii) The price for inland transportation, insurance, and other local services required to convey the Goods from the named place of destination to their final destination (Project Site) specified in the BDS;

c. For Goods manufactured outside the Purchaser’s Country, already imported:
   (i) The price of the Goods, including the original import value of the Goods; plus any mark-up (or rebate); plus any other
related local cost, and custom duties and other import
taxes already paid or to be paid on the Goods already
imported.

(ii) The custom duties and other import taxes already paid
(need to be supported with documentary evidence) or to
be paid on the Goods already imported;

(iv) The price of the Goods, obtained as the difference
between (i) and (ii) above;

(v) Any Purchaser’s Country sales and other taxes which will
be payable on the Goods if the contract is awarded to the
Bidder; and

(vi) The price for inland transportation, insurance, and other
local services required to convey the Goods from the
named place of destination to their final destination
(Project Site) specified in the BDS.

d. For Related Services, other than inland transportation and
other services required to convey the Goods to their final
destination, whenever such Related Services are specified in
the Schedule of Requirements:

(i) The price of each item comprising the Related Services
(inclusive of any applicable taxes).

15. Currencies of Bid
and Payment

15.1 The currency(ies) of the bid and the currency(ies) of payments shall
be as specified in the BDS. The Bidder shall quote in the currency of
the Purchaser’s Country the portion of the bid price that
Corresponds to expenditures incurred in the currency of the
Purchaser’s country, unless otherwise specified in the BDS.

15.2 The Bidder may express the bid price in any currency. If the Bidder
wishes to be paid in a combination of amounts in different
currencies, it may quote its price accordingly but shall use no more
that three foreign currencies in addition to the currency of the
Purchaser’s Country.

16. Documents
Establishing the
Eligibility and
Conformity of
the Goods and
Related Services

16.1 To establish the eligibility of the Goods and Related Services in
accordance with ITB 5, Bidders shall complete the country of origin
declarations in the Price Schedule Forms, included in Section IV,
Bidding Forms.

16.2 To establish the conformity of the Goods and Related Services to the
Bidding Documents, the Bidder shall furnish as part of its Bid the
documentary evidence that the Goods conform to the technical specifications and standards specified in Section VII, Schedule of Requirements.

16.3 The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed item by item description of the essential technical and performance characteristics of the Goods and Related Services, demonstrating substantial responsiveness of the Goods and Related Services to the technical specification, and if applicable, a statement of deviations and exceptions to the provisions of the Section VII, Schedule of Requirements.

16.4 The Bidder shall also furnish a list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the Goods during the period **specified in the BDS** following commencement of the use of the goods by the Purchaser.

16.5 Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Purchaser in the Schedule of Requirements, are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality, brand names, and/or catalogue numbers, provided that it demonstrates, to the Purchaser’s satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in the Section VII, Schedule of Requirements.

17. **Documents Establishing the Eligibility and Qualifications of the Bidder**

17.1 To establish Bidder’s eligibility in accordance with ITB 4, Bidders shall complete the Letter of Bid, included in Section IV, Bidding Forms.

17.2 The documentary evidence of the Bidder’s qualifications to perform the contract if its bid is accepted shall establish to the Purchaser’s satisfaction:

- a. That, if **required in the BDS**, a Bidder that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer’s Authorization using the form included in Section IV, Bidding Forms to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods to supply these Goods in the Purchaser’s Country;

- b. That, if **required in the BDS**, in case of a Bidder not doing business within the Purchaser’s Country, the Bidder is or will be
(if awarded the contract) represented by an Agent in the country equipped and able to carry out the Supplier’s maintenance, repair and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications; and

c. That the Bidder meets each of the qualification criterion specified in Section III, Evaluation and Qualification Criteria.

18. Period of Validity of Bids

18.1 Bids shall remain valid for the period specified in the BDS after the bid submission deadline date prescribed by the Purchaser in accordance with ITB22.1. A bid valid for a shorter period shall be rejected by the Purchaser as nonresponsive.

18.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Purchaser may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB Clause 19, it shall also be extended for a corresponding period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its bid, except as provided in ITB 18.3.

18.3 If the award is delayed by a period exceeding fifty-six (56) days beyond the expiry of the initial bid validity, the Contract price shall be determined as follows:

a. In the case of fixed price contracts, the Contract price shall be the bid price adjusted by the factor specified in the BDS.

b. In the case of adjustable price contracts, no adjustment shall be made.

c. In any case, bid evaluation shall be based on the bid price without taking into consideration the applicable correction from those indicated above.

19. Bid Security

19.1 The Bidder shall furnish as part of its bid, either a Bid-Securing Declaration or a bid security, as specified in the BDS, in original form and, in the case of a bid security. In the amount and currency specified in the BDS.

19.2A Bid Securing Declaration shall use the form included in Section IV, Bidding Forms.
19.3 If a bid security is specified pursuant to ITB 19.1, the bid security shall be a demand guarantee in any of the following forms at the Bidder’s option:

a. An unconditional guarantee issued by a bank or financial institution (such as an insurance, bonding or surety company);

b. An irrevocable letter of credit;

c. A cashier’s or certified check; or

d. Another security specified in the BDS,

From a reputable source from an eligible country. If the unconditional guarantee is issued by a financial institution located outside the Purchaser’s Country, the issuing financial institution shall have a correspondent financial institution located in the Purchaser’s Country to make it enforceable. In the case of a bank guarantee, the bid security shall be submitted either using the Bid Security Form included in Section IV, Bidding Forms, or in another substantially similar format approved by the Purchaser prior to bid submission. The bid security shall be valid for twenty-eight (28) days beyond the original validity period of the bid, or beyond any period of extension if requested under ITB 18.2.

19.4 If a Bid Security is specified pursuant to ITB 19.1, any bid not accompanied by a substantially responsive Bid Security shall be rejected by the Purchaser as non-responsive.

19.5 If a Bid Security is specified pursuant to ITB 19.1, the Bid Security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder’s signing the contract and furnishing the Performance Security pursuant to ITB 42.

19.6 The Bid Security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the contract and furnished the required performance security.

19.7 The Bid Security may be forfeited or the Bid Securing Declaration executed:

a. If a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bid, or any extension thereto provided by the Bidder; or
Instructions to Bidders

b. If the successful Bidder fails to:
   (i) Sign the Contract in accordance with ITB41; or
   (ii) Furnish a performance security in accordance with ITB 42.

19.8 The bid security or Bid-Securing Declaration of a JV must be in the name of the JV that submits the bid. If the JV has not been legally constituted into a legally enforceable JV at the time of bidding, the bid security or Bid-Securing Declaration shall be in the names of all future members as named in the letter of intent referred to in ITB 4.1 and ITB 11.2.

19.9 If a bid security is not required in the BDS, pursuant to ITB 19.1, and
   a. If a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bid, or
   b. If the successful Bidder fails to: sign the Contract in accordance with ITB41; or furnish a performance security in accordance with ITB 42; the Borrower may, if provided for in the BDS, declare the Bidder ineligible to be awarded a contract by the Purchaser for a period of time as stated in the BDS.

20. Format and Signing of Bid

20.1 The Bidder shall prepare one original of the documents comprising the bid as described in ITB 11 and clearly mark it “ORIGINAL.” Alternative bids, if permitted in accordance with ITB 13, shall be clearly marked “ALTERNATIVE.” In addition, the Bidder shall submit copies of the bid, in the number specified in the BDS and clearly mark them “COPY.” In the event of any discrepancy between the original and the copies, the original shall prevail.

20.2 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified in the BDS and shall be attached to the bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the bid where entries or amendments have been made shall be signed or initialed by the person signing the bid.

20.3 In case the Bidder is a JV, the Bid shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives.

20.4 Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the bid.
D. Submission and Opening of Bids

21. Sealing and Marking of Bids

21.1 The Bidder shall enclose the original and all copies of the bid, including alternative bids, if permitted in accordance with ITB 13, in separate sealed envelopes, duly marking the envelopes as “ORIGINAL”, “ALTERNATIVE” and “COPY.” These envelopes containing the original and the copies shall then be enclosed in one single envelope.

21.2 The inner and outer envelopes shall:
   a. Bear the name and address of the Bidder;
   b. Be addressed to the Purchaser in accordance with ITB 24.1;
   c. Bear the specific identification of this bidding process indicated in ITB1.1; and
   d. Bear a warning not to open before the time and date for bid opening.

21.3 If all envelopes are not sealed and marked as required, the Purchaser will assume no responsibility for the misplacement or premature opening of the bid.

22. Deadline for Submission of Bids

22.1 Bids must be received by the Purchaser at the address and no later than the date and time specified in the BDS. When so specified in the BDS, bidders shall have the option of submitting their bids electronically. Bidders submitting bids electronically shall follow the electronic bid submission procedures specified in the BDS.

22.2 The Purchaser may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Documents in accordance with ITB 8, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

23. Late Bids

23.1 The Purchaser shall not consider any bid that arrives after the deadline for submission of bids, in accordance with ITB 22. Any bid received by the Purchaser after the deadline for submission of bids shall be declared late, rejected, and returned unopened to the Bidder.

24. Withdrawal, Substitution, and Modification of Bids

24.1 A Bidder may withdraw, substitute, or modify its Bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization (the power of attorney) in accordance with ITB 20.2, (except that withdrawal notices do not require copies ). The
Section I Instructions to Bidders

24. Instructions to Bidders

Hydro-Meteorological Workstation and Automated Production System

corresponding substitution or modification of the bid must accompany the respective written notice. All notices must be:

a. Prepared and submitted in accordance with ITB 20 and 21 (except that withdrawal notices do not require copies), and in addition, the respective envelopes shall be clearly marked “Withdrawal,” “Substitution,” or “Modification;” and

b. Received by the Purchaser prior to the deadline prescribed for submission of bids, in accordance with ITB 22.

24.2 Bids requested to be withdrawn in accordance with ITB 24.1 shall be returned unopened to the Bidders.

24.3 No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid or any extension thereof.

25. Bid Opening

25.1 Except as in the cases specified in ITB 23 and 24, the Purchaser shall publicly open and read out in accordance with ITB25.3 all bids received by the deadline at the date, time and place specified in the BDS in the presence of Bidders’ designated representatives and anyone who choose to attend. Any specific electronic bid opening procedures required if electronic bidding is permitted in accordance with ITB 22.1, shall be as specified in the BDS.

25.2 First, envelopes marked “WITHDRAWAL” shall be opened and read out and the envelope with the corresponding bid shall not be opened, but returned to the Bidder. If the withdrawal envelope does not contain a copy of the “power of attorney” confirming the signature as a person duly authorized to sign on behalf of the Bidder, the corresponding bid will be opened. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening. Next, envelopes marked “SUBSTITUTION” shall be opened and read out and exchanged with the corresponding Bid being substituted, and the substituted Bid shall not be opened, but returned to the Bidder. No Bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at bid opening. Envelopes marked “MODIFICATION” shall be opened and read out with the corresponding Bid. No Bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Bid
opening. Only bids that are opened and read out at Bid opening shall be considered further.

25.3 All other envelopes shall be opened one at a time, reading out: the name of the Bidder and whether there is a modification; the total Bid Prices, per lot (contract) if applicable, including any discounts and alternative bids; the presence or absence of a Bid Security, if required; and any other details as the Purchaser may consider appropriate. Only discounts and alternative bids read out at Bid opening shall be considered for evaluation. The Letter of Bid and the Price Schedules are to be initialed by representatives of the Purchaser attending bid opening in the manner specified in the BDS. The Purchaser shall neither discuss the merits of any bid nor reject any bid (except for late bids, in accordance with ITB 25.1).

25.4 The Purchaser shall prepare a record of the bid opening that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, substitution, or modification; the Bid Price, per lot (contract) if applicable, including any discounts, and alternative bids; and the presence or absence of a Bid Security, if one was required. The Bidders’ representatives who are present shall be requested to sign the record. The omission of a Bidder’s signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.

E. Evaluation and Comparison of Bids

26. Confidentiality

26.1 Information relating to the evaluation of bids and recommendation of contract award, shall not be disclosed to bidders or any other persons not officially concerned with the bidding process until information on Contract Award is communication to all Bidders in accordance with ITB 40.

26.2 Any effort by a Bidder to influence the Purchaser in the evaluation or contract award decisions may result in the rejection of its Bid.

26.3 Notwithstanding ITB 26.2, from the time of bid opening to the time of Contract Award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it should do so in writing.
Section I Instructions to Bidders

27. Clarification of Bids

27.1 To assist in the examination, evaluation, comparison of the bids, and qualification of the Bidders, the Purchaser may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder in respect to its Bid and that is not in response to a request by the Purchaser shall not be considered. The Purchaser’s request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Purchaser in the Evaluation of the bids, in accordance with ITB 31.

27.2 If a Bidder does not provide clarifications of its bid by the date and time set in the Purchaser’s request for clarification, its bid may be rejected.

28. Deviations, Reservations, and Omissions

28.1 During the evaluation of bids, the following definitions apply:

a. “Deviation” is a departure from the requirements specified in the Bidding Documents;

b. “Reservation” is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Documents; and

c. “Omission” is the failure to submit part or all of the information or documentation required in the Bidding Documents.

29. Determination of Responsiveness

29.1 The Purchaser’s determination of a bid’s responsiveness is to be based on the contents of the bid itself, as defined in ITB 11.

29.2 A substantially responsive Bid is one that meets the requirements of the Bidding Documents without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:

a. If accepted, would

   (i) Affect in any substantial way the scope, quality, or performance of the Goods and Related Services specified in the Contract; or

   (ii) Limit in any substantial way, inconsistent with the Bidding Documents, the Purchaser’s rights or the Bidder’s obligations under the Contract; or

b. If rectified, would unfairly affect the competitive position of other bidders presenting substantially responsive bids.
29.3 The Purchaser shall examine the technical aspects of the bid submitted in accordance with ITB 16 and ITB 17, in particular, to confirm that all requirements of Section VII, Schedule of Requirements have been met without any material deviation or reservation, or omission.

29.4 If a bid is not substantially responsive to the requirements of Bidding Documents, it shall be rejected by the Purchaser and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

30. **Nonconformities, Errors and Omissions**

30.1 Provided that a Bid is substantially responsive, the Purchaser may waive any nonconformity in the Bid.

30.2 Provided that a bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

30.3 Provided that a bid is substantially responsive, the Purchaser shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component.

31. **Correction of Arithmetical Errors**

31.1 Provided that the Bid is substantially responsive, the Purchaser shall correct arithmetical errors on the following basis:

a. If there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;

b. If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
c. If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

31.2 Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with ITB 31.1, shall result in the rejection of the Bid.

32. Conversion to Single Currency

32.1 For evaluation and comparison purposes, the currency(ies) of the Bid shall be converted in a single currency as specified in the BDS.

33. Margin of Preference

33.1 Unless otherwise specified in the BDS, a margin of preference shall not apply.

34. Evaluation of Bids

34.1 The Purchaser shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted.

34.2 To evaluate a Bid, the Purchaser shall consider the following:

a. Evaluation will be done for Items or Lots (contracts), as specified in the BDS; and the Bid Price as quoted in accordance with clause 14;

b. Price adjustment for correction of arithmetic errors in accordance with ITB 31.1;

c. Price adjustment due to discounts offered in accordance with ITB 14.3;

d. Converting the amount resulting from applying (a) to (c) above, if relevant, to a single currency in accordance with ITB 32;

e. Price adjustment due to quantifiable nonmaterial nonconformities in accordance with ITB 30.3;

f. The additional evaluation factors are specified in Section III, Evaluation and Qualification Criteria;

34.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in bid evaluation.

34.4 If these Bidding Documents allows Bidders to quote separate prices for different lots (contracts), the methodology to determine the lowest evaluated price of the lot (contract) combinations, including any discounts offered in the Letter of Bid Form, is specified in Section III, Evaluation and Qualification Criteria
34.5 The Purchaser’s evaluation of a bid will exclude and not take into 
account:

a. In the case of Goods manufactured in the Purchaser’s Country, 
sales and other similar taxes, which will be payable on the 
goods if a contract is awarded to the Bidder;

b. In the case of Goods manufactured outside the Purchaser’s 
Country, already imported or to be imported, customs duties 
and other import taxes levied on the imported Good, sales and 
other similar taxes, which will be payable on the Goods if the 
contract is awarded to the Bidder;

c. Any allowance for price adjustment during the period of 
execution of the contract, if provided in the bid.

34.6 The Purchaser’s evaluation of a bid may require the consideration of 
other factors, in addition to the Bid Price quoted in accordance with 
ITB 14. These factors may be related to the characteristics, 
performance, and terms and conditions of purchase of the Goods 
and Related Services. The effect of the factors selected, if any, shall 
be expressed in monetary terms to facilitate comparison of bids, 
unless otherwise specified in the BDS from amongst those set out in 
Section III, Evaluation and Qualification Criteria. The criteria and 
methodologies to be used shall be as specified in ITB 34.2 (f).

35. Comparison of Bids

35.1 The Purchaser shall compare the evaluated prices of all substantially 
responsive bids established in accordance with ITB 34.2 to determine 
the lowest evaluated bid. The comparison shall be on the basis of CIP 
(place of final destination) prices for imported goods and EXW 
prices, plus cost of inland transportation and insurance to place of 
destination, for goods manufactured within the Borrower’s country, 
together with prices for any required installation, training, 
commissioning and other services. The evaluation of prices shall not 
take into account custom duties and other taxes levied on imported 
goods quoted CIP and sales and similar taxes levied in connection 
with the sale or delivery of goods.

36. Qualification of the Bidder

36.1 The Purchaser shall determine to its satisfaction whether the Bidder 
that is selected as having submitted the lowest evaluated and 
substantially responsive bid meets the qualifying criteria specified in 
Section III, Evaluation and Qualification Criteria.

36.2 The determination shall be based upon an examination of the 
documentary evidence of the Bidder’s qualifications submitted by 
the Bidder, pursuant to ITB 17.

36.3 An affirmative determination shall be a prerequisite for award of the 
Contract to the Bidder. A negative determination shall result in
disqualification of the bid, in which event the Purchaser shall proceed to the next lowest evaluated bid to make a similar determination of that Bidder’s qualifications to perform satisfactorily.

37. **Purchaser’s Right to Accept Any Bid, and to Disqualify Any or All Bids**

37.1 The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders. In case of annulment, all bids submitted and specifically, bid securities, shall be promptly returned to the Bidders.

**F. Award of Contract**

38. **Award Criteria**

38.1 Subject to ITB 37.1, the Purchaser shall award the Contract to the Bidder whose bid has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Documents, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.

39. **Purchaser’s Right to Vary Quantities at Time of Award**

39.1 At the time the Contract is awarded, the Purchaser reserves the right to increase or decrease the quantity of Goods and Related Services originally specified in Section VII, Schedule of Requirements, provided this does not exceed the percentages specified in the BDS, and without any change in the unit prices or other terms and conditions of the bid and the Bidding Documents.

40. **Notification of Award**

40.1 Prior to the expiration of the period of bid validity, the Purchaser shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification letter (hereinafter and in the Conditions of Contract and Contract Forms called the “Letter of Acceptance”) shall specify the sum that the Purchaser will pay the Supplier in consideration of the supply of Goods (hereinafter and in the Conditions of Contract and Contract Forms called “the Contract Price”). At the same time, the Purchaser shall also notify all other Bidders of the results of the bidding and shall publish in **UNDB online** the results identifying the bid and lot (contract) numbers and the following information:

(i) Name of each Bidder who submitted a Bid;

(ii) Bid prices as read out at Bid Opening;

(iii) Name and evaluated prices of each Bid that was evaluated;

(iv) Name of bidders whose bids were rejected and the reasons for their rejection; and

(v) Name of the successful Bidder, and the Price it offered, as well as the duration and summary scope of the contract awarded.

40.2 Until a formal Contract is prepared and executed, the notification of award shall constitute a binding Contract.
### 40.3 The Purchaser shall promptly respond in writing to any unsuccessful Bidder who, after notification of award in accordance with ITB 40.1, requests in writing the grounds on which its bid was not selected.

#### 41. Signing of Contract

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>41.1</td>
<td>Promptly after notification, the Purchaser shall send the successful Bidder the Contract Agreement.</td>
</tr>
<tr>
<td>41.2</td>
<td>Within twenty-eight (28) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Purchaser.</td>
</tr>
<tr>
<td>41.3</td>
<td>Notwithstanding ITB 41.2 above, in case signing of the Contract Agreement is prevented by any export restrictions attributable to the Purchaser, to the country of the Purchaser, or to the use of the products/goods, systems or services to be supplied, where such export restrictions arise from trade regulations from a country supplying those products/goods, systems or services, the Bidder shall not be bound by its bid, always provided however, that the Bidder can demonstrate to the satisfaction of the Purchaser and of the Bank that signing of the Contract Agreement has not been prevented by any lack of diligence on the part of the Bidder in completing any formalities, including applying for permits, authorizations and licenses necessary for the export of the products/goods, systems or services under the terms of the Contract.</td>
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</table>

#### 42. Performance Security

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
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<tbody>
<tr>
<td>42.1</td>
<td>Within twenty-eight (28) days of the receipt of notification of award from the Purchaser, the successful Bidder, if required, shall furnish the Performance Security in accordance with the GCC, subject to ITB 34.5, using for that purpose the Performance Security Form included in Section X, Contract Forms, or another Form acceptable to the Purchaser. If the Performance Security furnished by the successful Bidder is in the form of a bond, it shall be issued by a bonding or insurance company that has been determined by the successful Bidder to be acceptable to the Purchaser. A foreign institution providing a bond shall have a correspondent financial institution located in the Purchaser’s Country.</td>
</tr>
<tr>
<td>42.2</td>
<td>Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Purchaser may award the Contract to the next lowest evaluated Bidder, whose bid is substantially responsive and is determined by the Purchaser to be qualified to perform the Contract satisfactorily.</td>
</tr>
</tbody>
</table>
SECTION II. BID DATA SHEET (BDS)

The following specific data for the goods to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

<table>
<thead>
<tr>
<th>ITB Clause Reference</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td><strong>ITB 1.1</strong></td>
<td>The reference number of the Invitation for Bids is: <strong>PPCR/DHM/G/ICB-45</strong></td>
</tr>
<tr>
<td><strong>ITB 1.1</strong></td>
<td>The Purchaser is: <strong>Department of Hydrology and Meteorology Building Resilience to Climate Related Hazards Project, Project Management Unit, Nagpokhari, Kathmandu.</strong></td>
</tr>
<tr>
<td><strong>ITB 1.1</strong></td>
<td>The name of the ICB is: <strong>METEOROLOGICAL WORKSTATION AND AUTOMATED PRODUCTION SYSTEM (Supply, Installation and Commissioning)</strong> The identification number of the ICB is: <strong>PPCR/DHM/G/ICB-45</strong> The number and identification of lots (contracts)comprising this ICB is: <strong>(Not applicable)</strong></td>
</tr>
<tr>
<td><strong>ITB 2.1</strong></td>
<td>The Borrower is: <strong>Government of Nepal</strong></td>
</tr>
<tr>
<td><strong>ITB 2.1</strong></td>
<td>Loan or Financing Agreement amount: <strong>Total US$ 31 Million (SCF Loan 15 Million and SCF Grant 16 Million)</strong></td>
</tr>
<tr>
<td><strong>ITB 2.1</strong></td>
<td>The name of the Projects: <strong>Building Resilience to Climate Related Hazards Project</strong></td>
</tr>
<tr>
<td><strong>ITB 4.1</strong></td>
<td>Maximum number of members in the JV shall be: <strong>3 (three)</strong></td>
</tr>
<tr>
<td><strong>IITB 4.4</strong></td>
<td>A list of debarred firms and individuals is available on the Bank’s external website: <a href="http://www.worldbank.org/debarr">http://www.worldbank.org/debarr</a>.</td>
</tr>
</tbody>
</table>
### B. Contents of Bidding Documents

| ITB 7.1 | For **Clarification of bid purposes** only, the Purchaser’s address is:  
Attention: **Mr. Saraju Kumar Vaidya**, APD Address: Department of Hydrology and Meteorology  
**Building Resilience to Climate Related Hazards Project,**  
**Project Management Unit, Nagpokhari, Naxal,**  
Floor/Room number: **First Floor**  
City: **Kathmandu**  
ZIP Code: **Not applicable**  
Country: **Nepal**  
Telephone: **+977-1-4433563/44333472**  
Facsimile number: **+977-1-4433472/4436272**  
Electronic mail address: **ppcr.brch@dhm.gov.np**  
Requests for clarification should be received by the Employer no later than: **FIFTEEN (15) days** prior to the deadline date for submission of bid.  
Please add a paragraph below at the end of clause  
“*Also, a Pre-bid meeting shall be held at Purchaser’ address on date 25 – 10 - 2017 in order to clarify any issues or information related to bid.*” |

| ITB 7.1 | Web page: **www.dhm.gov.np** |

### C. Preparation of Bids

| ITB 10.1 | The language of the bid is: **English**  
All correspondence exchange shall be in English language.  
Language for translation of supporting documents and printed literature is **English.** |

| ITB 11.1 (j) | The Bidder shall submit the following additional documents in its bid: **None** |

| ITB 13.1 | Alternative Bids **shall not be** considered. |

| ITB 14.5 | The prices quoted by the Bidders **shall not** be subject to adjustment during the performance of the Contract. |

| ITB 14.6 | Prices quoted for each item of a lot shall correspond to **100** percent of the quantities specified for this item of a lot. |
| ITB 14.7 | The Incoterms edition is: **Incoterm 2000** |
| ITB 14.8 (b) (i) | Place of Destination: **CIP Kathmandu** |
| ITB 14.8 (a) (iii);(b)(ii) and (c)(v) | Final destination: Servers to be delivered and installed at NITC, KTM and 15 Work stations to be delivered and installed at DHM Head office in KTM and Regional Offices as specified elsewhere in this document. |
| ITB 15.1 | The prices shall be quoted by the bidder in: **Freely Convertible currency** The Bidder “is” required to quote in the currency of the Purchaser’s Country the portion of the bid price that corresponds to expenditures incurred in that currency. |
| ITB 16.4 | Period of time the Goods are expected to be functioning (for the purpose of spare parts): **10 years**. |
| ITB 17.2 (a) | Manufacturer’s authorization is required as follows: -Server(s), Computers, Uninterrupted Power Supplies (UPSs) and Displays as per the supplier’s best practice |
| ITB 17.2 (b) | After sales service is: **required** |
| ITB 18.1 | The bid validity period shall be **120 days** |
| ITB 18.3 (a) | The bid price shall be adjusted by the following factor(s):_______ The local currency portion of the Contract price shall be adjusted by a factor reflecting local inflation during the period of extension, and the foreign currency portion of the Contract price shall be adjusted by a factor reflecting the international inflation (in the country of the foreign currency) during the period of extension. |
| ITB 19.1 | A Bid Security “shall” be required. A Bid-Securing Declaration “shall not” be required. The amount and currency of the bid security shall be **NPR 36,00,000** (Nepali rupees three million six hundred thousand only) or equivalent freely convertible foreign currency. |
| ITB 19.3 (d) | Other types of acceptable securities: **None** |
| ITB 19.9 | (Not applicable) |
| ITB 20.1 | In addition to the original of the bid, the number of copies is: **2 (two)** |
| ITB 20.2 | The written confirmation of authorization to sign on behalf of the Bidder shall |
### D. Submission and Opening of Bids

<table>
<thead>
<tr>
<th>ITB 22.1</th>
<th>For bid submission purposes only, the Purchaser’s address is:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attention:</td>
<td>Mr. Rajendra Sharma, Chief/Procurement Unit,</td>
</tr>
<tr>
<td>Street Address:</td>
<td>Department of Hydrology and Meteorology</td>
</tr>
<tr>
<td>Procurement Unit, Nagpokhari, Naxal.</td>
<td></td>
</tr>
<tr>
<td>Floor/ Room number:</td>
<td>Third Floor</td>
</tr>
<tr>
<td>City:</td>
<td>Kathmandu</td>
</tr>
<tr>
<td>ZIP/Postal Code:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Country:</td>
<td>Nepal</td>
</tr>
<tr>
<td>The deadline for bid submission is:</td>
<td></td>
</tr>
<tr>
<td>Date:</td>
<td>13-11-2017</td>
</tr>
<tr>
<td>Time:</td>
<td>12:00 noon NST</td>
</tr>
</tbody>
</table>

Bidders “shall” have the option of submitting their bids electronically.

The electronic bidding submission procedures shall be: **Not Applicable**

<table>
<thead>
<tr>
<th>ITB 25.1</th>
<th>The bid opening shall take place at:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street Address:</td>
<td>Department of Hydrology and Meteorology,</td>
</tr>
<tr>
<td>Building Resilience to Climate Related Hazards Project,</td>
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<tr>
<td>Project Management Unit, Nagpokhari, Naxal.</td>
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</tr>
<tr>
<td>Floor/ Room number:</td>
<td>Ground Floor</td>
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<tr>
<td>City:</td>
<td>Kathmandu</td>
</tr>
<tr>
<td>Country:</td>
<td>Nepal</td>
</tr>
<tr>
<td>Date:</td>
<td>13-11-2017</td>
</tr>
<tr>
<td>Time:</td>
<td>01:00 pm NST</td>
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</tbody>
</table>

If bidders have the option of submitting their bids electronically, the electronic bidding opening procedures shall be: **Not Applicable**

| ITB 25.3 | The Letter of Bid and Price Schedules of Each Bid shall be initialed by all representatives of the Purchaser conducting Bid opening. |

### E. Evaluation and Comparison of Bids

| consist of: | **Letter of Authorization/ Power of attorney** |

---

**Hydro-Meteorological Workstation and Automated Production System**
The currency that shall be used for bid evaluation and comparison purposes to convert all bid prices expressed in various currencies into a single currency is: **Nepali rupees (NPR)**

The source of exchange rate shall be: **Nepal Rastra Bank**

The date for the exchange rate shall be: **17-10-2017** which is 28 days prior to the deadline for original submission of the Bids.

A margin of domestic preference “ **Shall not apply**”

Bids will be evaluated for Lots (total of all items).

The adjustments shall be determined using the following criteria, from amongst those set out in Section III, Evaluation and Qualification Criteria:

- a. Deviation in Delivery schedule: No.
- b. Deviation in payment schedule: No.
- c. The cost of major replacement components, mandatory spare parts, and service: No.
- d. The availability in the Purchaser’s Country of spare parts and after-sales services for the equipment offered in the bid: After sale Services- Yes; Spare parts- Not applicable
- e. The projected operating and maintenance costs during the life of the equipment: No.
- f. The performance and productivity of the equipment offered; **No.**

The maximum percentage by which quantities may be increased is: **15 percent**

The maximum percentage by which quantities may be decreased is: **15 percent**
SECTION III. EVALUATION AND QUALIFICATION CRITERIA

This Section contains all the criteria that the Purchaser shall use to evaluate a bid and qualify the Bidders. In accordance with ITB 34 and ITB 36, no other factors, methods or criteria shall be used.

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   2.1 Evaluation Criteria (ITB 34.6) ..................................................................................... 38
   2.2 Multiple Contracts (ITB 34.4): Not applicable ......................................................... 38
   2.3 Alternative Bids (ITB 13.1): Not applicable ............................................................... 38
3. Qualification (ITB 36)....................................................................................................... 38
   3.1 Post-qualification Requirements (ITB 36.1) .............................................................. 38
1. **Margin of Preference (ITB 33): Not applicable**

2. **Evaluation (ITB 34)**

2.1 **Evaluation Criteria (ITB 34.6)**

The Purchaser’s evaluation of a bid may take into account, in addition to the Bid Price quoted in accordance with ITB Clause 14.8, one or more of the following factors as specified in ITB34.2 (f) and in BDS referring to ITB34.6, using the following criteria and methodologies.

(a) Delivery schedule (as per Incoterms specified in the BDS): **Not applicable**

(b) Deviation in payment schedule: **Not applicable**

(c) Cost of major replacement components, mandatory spare parts, and service: **Not applicable**

(d) Availability in the Purchaser’s Country of spare parts and after sales services for equipment offered in the bid: After sales service- **Not applicable**; spare parts- **Not applicable**

(e) Projected operating and maintenance costs: **Not applicable**

(f) Performance and productivity of the equipment: **Not applicable**

(g) Specific additional criteria: **Not applicable**

2.2 **Multiple Contracts (ITB 34.4): Not applicable**

2.3 **Alternative Bids (ITB 13.1): Not applicable**

3. **Qualification (ITB 36)**

3.1 **Post-qualification Requirements (ITB 36.1)**

After determining the lowest-evaluated bid in accordance with ITB 35.1, the Purchaser shall carry out the post-qualification of the Bidder in accordance with ITB 36, using only the requirements specified. Requirements not included in the text below shall not be used in the evaluation of the Bidder’s qualifications.

(a) **If Bidder is Manufacturer:**

   (i) **Financial Capability**

   The Bidder shall furnish documentary evidence that it meets the following financial requirement(s): Average annual turnover of at least US$ 2,600,000 (two million six hundred thousand) in last 5 (five) years.

   (ii) **Experience and Technical Capacity**

   The Bidder shall furnish documentary evidence to demonstrate that it meets the following experience requirement(s): The bidder has successfully completed at least 3 (three) similar contracts in the past 10 (ten) years, and in which the supplied equipment has been successfully commissioned.

   (iii) **Documentary Evidence.**
The Bidder / Manufacturer shall furnish documentary evidence as requested in the specification documents to demonstrate that the Goods it offers meet the requirements stated in the technical specifications.

(b) If Bidder is not manufacturer:

If a Bidder is not a manufacturer, but is offering the Goods on behalf of the Manufacturer under Manufacturer's Authorization Form (Section IV, Bidding Forms), the Manufacturer shall demonstrate that it meets the above qualifications: (iii) and the Bidder shall demonstrate that it has annual average turnover of 2.5 times the value of the quoted price (without VAT if applicable) in the past 5 (five) years successfully completed at least (2) two similar contracts and provide evidence that the supplied equipment has been successfully commissioned.
# SECTION IV. BIDDING FORMS

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<tr>
<td>Manufacturer’s Authorization</td>
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</table>
**Letter of Bid**

_The Bidder must prepare the Letter of Bid on stationery with its letterhead clearly showing the Bidder’s complete name and address._

Date: [insert date (as day, month and year) of Bid Submission]

ICB No; **PPCR/DHM/G/ICB-45**

Invitation for Bid No.: [insert identification]

To:

Department of Hydrology and Meteorology

Building Resilience to Climate Related Hazards Project,

Project Management Unit,

Nagpokhari, Naxal, Kathmandu

a. We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB 8) _________________________________;

b. We meet the eligibility requirements and have no conflict of interest in accordance with ITB 4;

c. We have not been suspended nor declared ineligible by the Purchaser based on execution of a Bid Securing Declaration in the Purchaser’s country in accordance with ITB 4.6

d. We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Goods:
   - Two (2) servers (of which one is for hot-back-up) with accessories and associated software according supplier best practice.
   - Fifteen (15) workstations with specified accessories and software meeting the specifications.

e. The total price of our Bid, excluding any discounts offered in item (f) below is:
   
   [The total price of the bid in words and figures, indicating the various amounts and the respective currencies]
The discounts offered and the methodology for their application are:

(i) The discounts offered are: [Specify in detail each discount offered.]

(ii) The exact method of calculations to determine the net price after application of discounts is shown below: [Specify in detail the method that shall be used to apply the discounts];

Our bid shall be valid for a period of **120 days** from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Documents;

We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process in accordance with ITB 4.2(e), other than alternative bids submitted in accordance with ITB 13;

We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by a member of the World Bank Group or a debarment imposed by the World Bank Group in accordance with the Agreement for Mutual Enforcement of Debarment Decisions between the World Bank and other development banks. Further, we are not ineligible under the Employer’s country laws or official regulations or pursuant to a decision of the United Nations Security Council;

We are not a government owned entity/ we are a government owned entity but meet the requirements of ITB 4.5;

We have paid, or will pay the following commissions, gratuities, or fees with respect to the bidding process or execution of the Contract: [insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity]

<table>
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<tr>
<th>Name of Recipient</th>
<th>Address</th>
<th>Reason</th>
<th>Amount</th>
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</table>

(If none has been paid or is to be paid, indicate “none.”)

1 Bidder to use as appropriate
m. We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed; and

n. We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

o. We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any type of fraud and corruption

Name of the Bidder*[insert complete name of person signing the Bid]

Name of the person duly authorized to sign the Bid on behalf of the Bidder** [insert complete name of person duly authorized to sign the Bid]

Title of the person signing the Bid [insert complete title of the person signing the Bid]

Signature of the person named above [insert signature of person whose name and capacity are shown above]

Date signed [insert date of signing] day of [insert month], [insert year]

*: In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder

**: Person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid Schedules.
# Bidder Information Form

[The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: [insert date (as day, month and year) of Bid Submission]

ICB No.: PPCR/DHM/G/ICB-45

Page __________ of ______ pages

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>1.</strong> Bidder’s Name</td>
<td>[insert Bidder’s legal name]</td>
</tr>
<tr>
<td><strong>2.</strong> In case of JV, legal name of each member</td>
<td>[insert legal name of each member in JV]</td>
</tr>
<tr>
<td><strong>3.</strong> Bidder’s actual or intended country of registration</td>
<td>[insert actual or intended country of registration]</td>
</tr>
<tr>
<td><strong>4.</strong> Bidder’s year of registration</td>
<td>[insert Bidder’s year of registration]</td>
</tr>
<tr>
<td><strong>5.</strong> Bidder’s Address in country of registration</td>
<td>[insert Bidder’s legal address in country of registration]</td>
</tr>
<tr>
<td><strong>6.</strong> Bidder’s Authorized Representative Information</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>[insert Authorized Representative’s name]</td>
</tr>
<tr>
<td>Address</td>
<td>[insert Authorized Representative’s Address]</td>
</tr>
<tr>
<td>Telephone/Fax numbers</td>
<td>[insert Authorized Representative’s telephone/fax numbers]</td>
</tr>
<tr>
<td>Email Address</td>
<td>[insert Authorized Representative’s email address]</td>
</tr>
<tr>
<td><strong>7.</strong> Attached are copies of original documents</td>
<td>[check the box(es) of the attached original documents]</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITB 4.3.</td>
</tr>
<tr>
<td></td>
<td>In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 4.1.</td>
</tr>
<tr>
<td></td>
<td>In case of Government-owned enterprise or institution, in accordance with ITB 4.5 documents establishing:</td>
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<tr>
<td><strong>8.</strong> Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.</td>
<td></td>
</tr>
</tbody>
</table>
**Bidder’s JV Members Information Form**

[The Bidder shall fill in this Form in accordance with the instructions indicated below. The following table shall be filled in for the Bidder and for each member of a Joint Venture].

- **Date:** [insert date (as day, month and year) of Bid Submission]
- **ICB No.:** [insert number of bidding process]

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>1.</td>
<td>Bidder’s Name: [insert Bidder’s legal name]</td>
</tr>
<tr>
<td>2.</td>
<td>Bidder’s JV Member’s name: [insert JV’s Member legal name]</td>
</tr>
<tr>
<td>3.</td>
<td>Bidder’s JV Member’s country of registration: [insert JV’s Member country of registration]</td>
</tr>
<tr>
<td>4.</td>
<td>Bidder’s JV Member’s year of registration: [insert JV’s Member year of registration]</td>
</tr>
<tr>
<td>5.</td>
<td>Bidder’s JV Member’s legal address in country of registration: [insert JV’s Member legal address in country of registration]</td>
</tr>
<tr>
<td>6.</td>
<td>Bidder’s JV Member’s authorized representative information</td>
</tr>
<tr>
<td></td>
<td>Name: [insert name of JV’s Member authorized representative]</td>
</tr>
<tr>
<td></td>
<td>Address: [insert address of JV’s Member authorized representative]</td>
</tr>
<tr>
<td></td>
<td>Telephone/Fax numbers: [insert telephone/fax numbers of JV’s Member authorized representative]</td>
</tr>
<tr>
<td></td>
<td>Email Address: [insert email address of JV’s Member authorized representative]</td>
</tr>
<tr>
<td>7.</td>
<td>Attached are copies of original documents of [check the box(es) of the attached original documents]</td>
</tr>
<tr>
<td></td>
<td>• Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITB 4.3.</td>
</tr>
<tr>
<td></td>
<td>• In case of a Government-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and absence of dependent status, in accordance with ITB 4.5.</td>
</tr>
<tr>
<td>8.</td>
<td>Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.</td>
</tr>
</tbody>
</table>
Price Schedule Forms

[The Bidder shall fill in these Price Schedule Forms in accordance with the instructions indicated. The list of line items in column 1 of the Price Schedules shall coincide with the List of Goods and Related Services specified by the Purchaser in the Schedule of Requirements.]
## Price Schedule: Goods Manufactured Outside the Purchaser’s Country, to be Imported

Currencies in accordance with ITB 15

<table>
<thead>
<tr>
<th>Line Item N°</th>
<th>Description of Goods</th>
<th>Country of Origin</th>
<th>Delivery Date as defined by Incoterm</th>
<th>Quantity and physical unit</th>
<th>Unit price CIP [insert place of destination] in accordance with ITB 14.8(b)(i)</th>
<th>CIP Price per line item (Col. 5x6)</th>
<th>Price per line item for inland transportation and other services required in the Purchaser's country to convey the Goods to their final destination specified in BDS</th>
<th>Total Price per Line item (Col. 7+8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>[insert name of good]</td>
<td>[insert country of origin of the Good]</td>
<td>[insert quoted Delivery Date]</td>
<td>[insert number of units to be supplied and name of the physical unit]</td>
<td>[insert unit price CIP per unit]</td>
<td>[insert total CIP price per line item]</td>
<td>[insert the corresponding price per line item]</td>
<td>[insert total price of the line item]</td>
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### Section IV Bidding Forms

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</tbody>
</table>

**Total Price**

Name of Bidder [insert complete name of Bidder] Signature of Bidder [signature of person signing the Bid] Date [Insert Date]
## Price Schedule: Goods Manufactured Outside the Purchaser's Country, already imported*

Currencies in accordance with ITB 15

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line Item N°</td>
<td>Description of Goods</td>
<td>Country of Origin</td>
<td>Delivery Date as defined by Incoterms</td>
<td>Quantity and physical unit</td>
<td>Unit price including Custom Duties and Import Taxes paid, in accordance with ITB 14.8(c)(i)</td>
<td>Custom Duties and Import Taxes paid per unit in accordance with ITB 14.8(c)(ii), [to be supported by documents]</td>
<td>Unit Price net of custom duties and import taxes, in accordance with ITB 148 (c) (iii) (Col. 6 minus Col.7)</td>
<td>Price per line item net of Custom Duties and Import Taxes paid, in accordance with ITB 14.8(c)(i) (Col. 5x8)</td>
<td>Price per line item for inland transportation and other services required in the Purchaser's country to convey the goods to their final destination, as specified in BDS in accordance with ITB 14.8 (c)(v)</td>
<td>Sales and other taxes paid or payable per item if Contract is awarded (in accordance with ITB 14.8(c)(iv))</td>
<td>Total Price per line item (Col. 9+10)</td>
</tr>
<tr>
<td>[insert number of the item]</td>
<td>[insert name of Goods]</td>
<td>[insert country of origin of the Good]</td>
<td>[insert quoted Delivery Date]</td>
<td>[insert number of units to be supplied and name of the physical unit]</td>
<td>[insert unit price per unit]</td>
<td>[insert custom duties and taxes paid per unit]</td>
<td>[insert unit price net of custom duties and import taxes]</td>
<td>[insert price per line item net of custom duties and import taxes]</td>
<td>[insert price per line item for inland transportation and other services required in the Purchaser's country]</td>
<td>[insert sales and other taxes payable per item if Contract is awarded]</td>
<td>[insert total price per line item]</td>
</tr>
<tr>
<td>1</td>
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</tr>
</tbody>
</table>

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* Meteorological Workstation and Automated Production System
**Section IV Bidding Forms**

<table>
<thead>
<tr>
<th>Name of Bidder</th>
<th>Signature of Bidder</th>
<th>Date</th>
</tr>
</thead>
</table>

* [For previously imported Goods, the quoted price shall be distinguishable from the original import value of these Goods declared to customs and shall include any rebate or mark-up of the local agent or representative and all local costs except import duties and taxes, which have been and/or have to be paid by the Purchaser. For clarity the bidders are asked to quote the price including import duties, and additionally to provide the import duties and the price net of import duties which is the difference of those values].

---

50 Meteorological Workstation and Automated Production System
### Price Schedule: Goods Manufactured in the Purchaser’s Country

<table>
<thead>
<tr>
<th>Line Item N°</th>
<th>Description of Goods</th>
<th>Delivery Date as defined by Incoterms</th>
<th>Quantity and physical unit</th>
<th>Unit price EXW</th>
<th>Total EXW price per line item (Col. 4x5)</th>
<th>Price per line item for inland transportation and other services required in the Purchaser’s Country to convey the Goods to their final destination</th>
<th>Cost of local labor, raw materials and components from with origin in the Purchaser’s Country % of Col. 5</th>
<th>Sales and other taxes payable per line item if Contract is awarded (in accordance with ITB 14.8(a)(ii))</th>
<th>Total Price per ICB No:</th>
<th>Alternative No:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[insert number of the item]</td>
<td>[insert name of Good]</td>
<td>[insert quoted Delivery Date]</td>
<td>[insert number of units to be supplied and name of the physical unit]</td>
<td>[insert EXW unit price]</td>
<td>[insert total EXW price per line item]</td>
<td>[insert the corresponding price per line item]</td>
<td>[insert cost of local labor, raw material and components from within the Purchaser’s country as a % of the EXW price per line item]</td>
<td>[insert sales and other taxes payable per line item if Contract is awarded]</td>
<td>[insert total price per item]</td>
<td></td>
</tr>
</tbody>
</table>

**Name of Bidder** [insert complete name of Bidder]  **Signature of Bidder** [signature of person signing the Bid]  **Date** [insert date]

---

Meteorological Workstation and Automated Production System 51
# Price and Completion Schedule –Related Services

Currencies in accordance with ITB 15

<table>
<thead>
<tr>
<th>Service N°</th>
<th>Description of Services (excludes inland transportation and other services required in the Purchaser’s country to convey the goods to their final destination)</th>
<th>Country of Origin</th>
<th>Delivery Date* at place of Final destination</th>
<th>Quantity and physical unit</th>
<th>Unit price</th>
<th>Total Price per Service (Col. 5*6 or estimate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Training to DHM technical staff as per technical specification 13.1</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
| 2          | Training Course for Forecasters on basic tools and practices of the workstation  
2 courses for 5 (five) days for 6 (six) persons per one course |                   |                                               |                             |            |                                               |

Date: ___________________

ICB No: PPCR/DHM/G/ICB-45

Page N° _______ of _______
<table>
<thead>
<tr>
<th></th>
<th>Training course for forecasters on advanced workstation features, with emphasis on Data Editing, Warning tools and Tools for specialized services</th>
<th>11 months after Contract effective date DHM HQ Kathmandu</th>
<th>2 (two) courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2 courses for 5 (five) days for 6 (six) persons per one course</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Training course for System Administrators on routine operations and system maintenance</td>
<td>12 months after Contract effective date DHM HQ Kathmandu</td>
<td>1 (one) course</td>
</tr>
<tr>
<td></td>
<td>1 course for 5 (five) days for 8 (eight) persons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Training course for System Administrators on automated display and delivery of products on DHM Web sites and Mobile devices</td>
<td>12 months after Contract effective date DHM HQ Kathmandu</td>
<td>1 (one) course</td>
</tr>
<tr>
<td></td>
<td>1 course for 5 (five) days for 8 (eight) persons</td>
<td></td>
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</tr>
<tr>
<td>5</td>
<td>On-line technical support, related services and license fees after commissioning (Spec. Item 12.6).</td>
<td>From Commissioning up to subsequent 60 months for servers at NITC and workstation sites as specified in Table 1</td>
<td>1 job</td>
</tr>
<tr>
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</tbody>
</table>
Section IV Bidding Forms

Name of Bidder  [insert complete name of Bidder]  Signature of Bidder  [signature of person signing the Bid]  Date  [insert date]
Form of Bid Security

(Bank Guarantee)

[The bank shall fill in this Bank Guarantee Form in accordance with the instructions indicated.]

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: [Purchaser to insert its name and address]

IFB No.: [Purchaser to insert reference number for the Invitation for Bids]

Alternative No.: [Insert identification No if this is a Bid for an alternative]

Date: [Insert date of issue]

BID GUARANTEE No.: [Insert guarantee reference number]

Guarantor: [Insert name and address of place of issue, unless indicated in the letterhead]

We have been informed that ______ [insert name of the Bidder, which in the case of a joint venture shall be the name of the joint venture (whether legally constituted or prospective) or the names of all members thereof] (hereinafter called "the Applicant") has submitted or will submit to the Beneficiary its bid (hereinafter called "the Bid") for the execution of ________________ under Invitation for Bids No. ___________ (“the IFB”).

Furthermore, we understand that, according to the Beneficiary’s conditions, bids must be supported by a bid guarantee.

At the request of the Applicant, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _______________ (____________) upon receipt by us of the Beneficiary’s complying demand, supported by the Beneficiary’s statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating that either the Applicant:

(a) Has withdrawn its Bid during the period of bid validity set forth in the Applicant’s Letter of Bid (“the Bid Validity Period”), or any extension thereto provided by the Applicant; or

(b) Having been notified of the acceptance of its Bid by the Beneficiary during the Bid Validity Period or any extension thereto provided by the
Section IV Bidding Forms

Applicant, (i) has failed to execute the contract agreement, or (ii) has failed to furnish the performance security, in accordance with the Instructions to Bidders (“ITB”) of the Beneficiary’s bidding document.

This guarantee will expire: (a) if the Applicant is the successful bidder, upon our receipt of copies of the contract agreement signed by the Applicant and the performance security issued to the Beneficiary in relation to such contract agreement; or (b) if the Applicant is not the successful bidder, upon the earlier of (i) our receipt of a copy of the Beneficiary’s notification to the Applicant of the results of the bidding process; or (ii) twenty-eight days after the end of the Bid Validity Period.

Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758.

__________________________
[Signature(s)]

Note: All italicized text is for use in preparing this form and shall be deleted from the final product.
Form of Bid Security (Bid Bond) (Not applicable)

[The Surety shall fill in this Bid Bond Form in accordance with the instructions indicated.]

BOND NO. ______________________

BY THIS BOND [name of Bidder] as Principal (hereinafter called “the Principal”), and [name, legal title, and address of surety], authorized to transact business in [name of country of Purchaser], as Surety (hereinafter called “the Surety”), are held and firmly bound unto [name of Purchaser] as Obligee (hereinafter called “the Purchaser”) in the sum of [amount of Bond] [amount in words], for the payment of which sum, well and truly to be made, we, the said Principal and Surety, bind ourselves, our successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal has submitted or will submit a written Bid to the Purchaser dated the ___ day of ______, 20__, for the supply of [name of Contract] (hereinafter called the “Bid”).

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal:

a. Has withdrawn its Bid during the period of bid validity set forth in the Principal’s Letter of Bid (“the Bid Validity Period”), or any extension thereto provided by the Principal; or

b. Having been notified of the acceptance of its Bid by the Purchaser during the Bid Validity Period or any extension thereto provided by the Principal; (i) failed to execute the contract agreement; or (ii) has failed to furnish the Performance Security, in accordance with the Instructions to Bidders (“ITB”) of the Purchaser’s bidding document.

then the Surety undertakes to immediately pay to the Purchaser up to the above amount upon receipt of the Purchaser’s first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser shall state that the demand arises from the occurrence of any of the above events, specifying which event(s) has occurred.

The Surety hereby agrees that its obligation will remain in full force and effect up to and including the date 28 days after the date of expiration of the Bid Validity Period set forth in the Principal’s Letter of Bid or any extension thereto provided by the Principal.

IN TESTIMONY WHEREOF, the Principal and the Surety have caused these presents to be executed in their respective names this ___ day of ____________ 20__.

Principal: ________________________ Surety: ________________________

________________________________________________________________________

(Signature) (Signature)
(Printed name and title) (Printed name and title)

Corporate Seal (where appropriate)

2 The amount of the Bond shall be denominated in the currency of the Purchaser’s country or the equivalent amount in a freely convertible currency.
Form of Bid-Securing Declaration (Not Applicable)

[The Bidder shall fill in this Form in accordance with the instructions indicated.]

Date: [date (as day, month and year)]
Bid No.: [number of bidding process]
Alternative No.: [insert identification No if this is a Bid for an alternative]

To: [complete name of Purchaser]

We, the undersigned, declare that:

We understand that, according to your conditions, bids must be supported by a Bid-Securing Declaration.

We accept that we will automatically be suspended from being eligible for bidding in any contract with the Purchaser for the period of time of [number of months or years] starting on [date], if we are in breach of our obligation(s) under the bid conditions, because we:

(a) Have withdrawn our Bid during the period of bid validity specified in the Letter of Bid; or
(b) Having been notified of the acceptance of our Bid by the Purchaser during the period of bid validity, (i) fail or refuse to execute the Contract; or (ii) fail or refuse to furnish the Performance Security, if required, in accordance with the ITB.

We understand this Bid Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) twenty-eight days after the expiration of our Bid.

Name of the Bidder*: ________________________________

Name of the person duly authorized to sign the Bid on behalf of the Bidder**: __________

Title of the person signing the Bid ________________________________

Signature of the person named above ________________________________

Date signed ________________________________, day of ____________________, _____

*: In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder

**: Person signing the Bid shall have the power of attorney given by the Bidder attached to the Bid

[Note: In case of a Joint Venture, the Bid-Securing Declaration must be in the name of all members to the Joint Venture that submits the bid.]
Manufacturer’s Authorization

[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer. The Bidder shall include it in its bid, if so indicated in the BDS.]

Date: [insert date (as day, month and year) of Bid Submission]
ICB No.: PPCR/DHM/G/ICB-45

To: [insert complete name of Purchaser]

To: [insert complete name of Purchaser]

WHEREAS

We [insert complete name of Manufacturer], who are official manufacturers of, **Servers and related equipment; Workstations and related equipment**, having factories at [insert full address of Manufacturer’s factories], do hereby authorize [insert complete name of Bidder] to submit a bid the purpose of which is to provide the following Goods, manufactured by us [insert name and or brief description of the Goods], and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 28 of the General Conditions of Contract, with respect to the Goods offered by the above firm.

Signed: [insert signature(s) of authorized representative(s) of the Manufacturer]

Name: [insert complete name(s) of authorized representative(s) of the Manufacturer]

Title: [insert title]

Dated on ____________ day of __________________, _______ [insert date of signing]
SECTION V. ELIGIBLE COUNTRIES

Eligibility for the Provision of Goods, Works and Non Consulting Services in Bank-Financed Procurement

In reference to ITB 4.7 and 5.1, for the information of the Bidders, at the present time firms, goods and services from the following countries are excluded from this bidding process:

Under ITB 4.7(a) and 5.1: None
Under ITB 4.7(b) and 5.1: None
SECTION VI. BANK POLICY - CORRUPT AND FRAUDULENT PRACTICES

“Fraud and Corruption:

1.6 It is the Bank’s policy to require that Borrowers (including beneficiaries of Bank loans), bidders, suppliers, contractors and their agents (whether declared or not), sub-contractors, sub-consultants, service providers or suppliers, and any personnel thereof, observe the highest standard of ethics during the procurement and execution of Bank-financed contracts. In pursuance of this policy, the Bank:

(a) Defines, for the purposes of this provision, the terms set forth below as follows:

(i) “Corrupt practice” is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

(ii) “Fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

(iii) “Collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;

(iv) “Coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

3 In this context, any action to influence the procurement process or contract execution for undue advantage is improper.

4 For the purpose of this sub-paragraph, “another party” refers to a public official acting in relation to the procurement process or contract execution. In this context, “public official” includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

5 For the purpose of this sub-paragraph, “party” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution.

6 For the purpose of this sub-paragraph, “parties” refers to participants in the procurement process (including public officials) attempting either themselves, or through another person or entity not participating in the procurement or selection process, to simulate competition or to establish bid prices at artificial, non-competitive levels, or are privy to each other’s bid prices or other conditions.

7 For the purpose of this sub-paragraph, “party” refers to a participant in the procurement process or contract execution.
(v) "Obstructive practice" is:

(aa) Deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or

(bb) Acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under paragraph 1.16(e) below.

(b) Will reject a proposal for award if it determines that the bidder recommended for award, or any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;

(c) Will declare mis-procurement and cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, coercive, or obstructive practices during the procurement or the implementation of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;

(d) Will sanction a firm or individual, at any time, in accordance with the prevailing Bank’s sanctions procedures,\(^8\) including by publicly declaring such firm or individual ineligible, either indefinitely or for a stated period of time: (i) to be awarded a Bank-financed contract; and (ii) to be a nominated\(^9\);

(e) Will require that a clause be included in bidding documents and in contracts financed by a Bank loan, requiring bidders, suppliers and contractors, and their sub-contractors, agents, personnel, consultants, service providers, or suppliers, to permit the Bank to inspect all accounts, records, and other documents relating to the submission of bids and contract performance, and to have them audited by auditors appointed by the Bank.\(^{10}\)

---

8 A firm or individual may be declared ineligible to be awarded a Bank financed contract upon: (i) completion of the Bank's sanctions proceedings as per its sanctions procedures, including, inter alia, cross-debarment as agreed with other International Financial Institutions, including Multilateral Development Banks, and through the application the World Bank Group corporate administrative procurement sanctions procedures for fraud and corruption; and (ii) as a result of temporary suspension or early temporary suspension in connection with an ongoing sanctions proceeding. See footnote 14 and paragraph 8 of Appendix 1 of these Guidelines.

9 A nominated sub-contractor, consultant, manufacturer or supplier, or service provider (different names are used depending on the particular bidding document) is one which has either been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.
PART 2 – SUPPLY REQUIREMENTS
SECTION VII. SCHEDULE OF REQUIREMENTS
### 2.1 List of Goods and Delivery Schedule

[The Purchaser shall fill in this table, with the exception of the column “Bidder’s offered Delivery date” to be filled by the Bidder]

<table>
<thead>
<tr>
<th>Line Item N°</th>
<th>Description of Goods</th>
<th>Quantity</th>
<th>Physical units</th>
<th>Final (Project Site) Destination as specified in BDS</th>
<th>Delivery (as per CIP Incoterms) Date2000</th>
<th>Earliest Delivery Date</th>
<th>Latest Delivery Date</th>
<th>Bidder’s offered Delivery date [to be provided by the bidder]</th>
</tr>
</thead>
<tbody>
<tr>
<td>[insert item No]</td>
<td>[insert description of Goods]</td>
<td>[insert quantity of item to be supplied]</td>
<td>[insert physical units for the quantity]</td>
<td>[insert place of Delivery]</td>
<td>[insert the number of days following the date of effectiveness the Contract]</td>
<td>[insert the number of month following the date of effectiveness the Contract]</td>
<td>[insert the number of days following the date of effectiveness the Contract]</td>
<td></td>
</tr>
</tbody>
</table>

1. Hardware (Spec. Item 10)

1.1 Server(s) with accessories and UPS as per Specification/Supplier’s best practice; 2 units Installed, tested and commissioned at National Information Technology Centre 8 months Please refer to Table 1. Implementation Schedule in Technical Specification
<table>
<thead>
<tr>
<th>1.2</th>
<th>Workstations: 15 PC's, 17 x 23” displays, 16 x 27” display, 8 stands and standard accessories as per specification/Supplier’s best practice; detailed below in WS type a, b and c:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>WS type a</strong>: 4 PC’s, each with 4 x 27” displays; 8 stands to fix 2 displays on top of the other two displays for each PC;</td>
</tr>
<tr>
<td></td>
<td><strong>WS Type b</strong>: 6 PCs’, each with 2 x 23” displays;</td>
</tr>
<tr>
<td></td>
<td><strong>WS Type c</strong>: 5 PC’s each with 1 x 23” displays</td>
</tr>
</tbody>
</table>

| 4 units | Installed, tested and commissioned at DHM sites as specified as per WS Type in Table 1. Implementation Schedule in Technical Specification | 8 months | Reference is made to Table 1. Implementation Schedule in Technical Specification |
### Section VII Schedule of Requirements

#### 2. Software

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Package Type</th>
<th>Implementation Schedule</th>
<th>Please refer to Table 1. Implementation Schedule in Technical Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Software for servers and Workstations including Graphical User Interface (GUI); Data Ingest, system installation and set-up; Inspections and tests; Spec. Items: 1 -4; 9-12 &amp; 14)</td>
<td>Software package</td>
<td>Installed, tested and commissioned to all servers and workstations</td>
<td>9 months</td>
</tr>
<tr>
<td>2.2</td>
<td>Warning tool to handle and issue multiple warnings conforming to Common Alerting protocol (CAP); Spec. Item 5.</td>
<td>Software package</td>
<td>Installed to all servers and workstations</td>
<td>9 months</td>
</tr>
<tr>
<td>2.3</td>
<td>Tools for preparing/handling ICAO Annex III products for aeronautical weather services; Spec. Item 6.</td>
<td>Software package</td>
<td>Installed to all servers and workstations</td>
<td>9 months</td>
</tr>
<tr>
<td>2.4</td>
<td>Automated generation of end-products; Spec. Item 7.</td>
<td>1</td>
<td>Software package</td>
<td>Installed to units according to supplier best practice</td>
</tr>
<tr>
<td>-----</td>
<td>-------------------------------------------------</td>
<td>---</td>
<td>----------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>2.5</td>
<td>Mobile App(s) to publish weather service products on mobile devices; Spec. Item 8.</td>
<td>1</td>
<td>Software package</td>
<td>Installed to units according to supplier best practice</td>
</tr>
</tbody>
</table>
2.2 Related Services and Completion Schedule

2.3 Training Services

As part of the implementation services delivered under the contract, the Contractor shall be responsible for delivering the following training program, which is broken down into training courses as specified below. Detailed requirements for the training are given in Spec. Item 13.

<table>
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<tr>
<th>Service</th>
<th>Description</th>
<th>Quantity</th>
<th>Physical Unit</th>
<th>Place where Services are to be Performed</th>
<th>Final Completion Dates of Service</th>
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<td>2.3.1</td>
<td>Training Course for Forecasters on basic tools and practices of the workstation 2 courses for 5 (five) days for 6 (six) persons per one course</td>
<td>2</td>
<td>courses</td>
<td>Kathmandu,</td>
<td>11 months after contract’s effective date</td>
</tr>
<tr>
<td>2.3.2</td>
<td>Training course for forecasters on advanced workstation features, with emphasis on Data Editing, Warning tools and Tools for specialized services 2 courses for 5 (five) days for 6 (six) persons per one course</td>
<td>2</td>
<td>courses</td>
<td>Kathmandu,</td>
<td>11 months after contract’s effective date</td>
</tr>
<tr>
<td>2.3.3</td>
<td>Training course for System Administrators on routine operations and system maintenance 1 course for 5 (five) days for 8 (eight) persons</td>
<td>1</td>
<td>course</td>
<td>Kathmandu,</td>
<td>12 months after contract’s effective date</td>
</tr>
</tbody>
</table>
2.3.4 Training course for System Administrators on automated display and delivery of products on DHM Web sites and Mobile devices  
1 course for 5 (five) days for 8 (eight) persons  
1 course  
Kathmandu,  
12 months after contract’s effective date

2.4 On-line technical support, related services and license fees after commissioning (Spec. Item 12.6)

<table>
<thead>
<tr>
<th>Service</th>
<th>Description</th>
<th>Quantity</th>
<th>Place where Services are to be Performed</th>
<th>Final Completion Dates of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.4.1</td>
<td>On-line technical support, related services and license fees after commissioning (Spec. Item 12.6).</td>
<td>1 job</td>
<td>NITC and specified DHM workstation sites</td>
<td>From Commissioning up to subsequent 60 months (5 years) for servers at NITC and workstation sites as specified in Table 1</td>
</tr>
</tbody>
</table>
### 3. Technical Specifications

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Background

The objective of the BRCH project\(^{10}\) is to enhance government capacity to mitigate climate related hazards by improving accuracy and timeliness of weather and flood forecasts and warnings for climate vulnerable communities, as well as developing Agricultural Management Information System (AMIS) services, administered by the Ministry of Agriculture Development (MoAD), to help farmers mitigate climate related production risks. The project comprises four components:

A. Institutional strengthening, capacity building and implementation support of DHM;
B. Modernization of observation networks and forecasting;
C. Enhancement of the service delivery system of DHM; and
D. Creation of an agriculture management information system (AMIS).

This procurement package contributes mainly to Components A and C, which aim to enhance the service delivery system of DHM by creating a public weather service that provides weather and forecasts impact, and information services for climate-vulnerable communities and the key weather dependent sectors. The tools provided by this package will be designed in a way to help the meteorologist and hydrologist to work efficiently and to provide best quality of services to the society of Nepal.

Introduction

Present situation

Presently the service production process at DHM is manual in most steps: Meteorologists at the Meteorological Forecast Division can view observation, satellite and Numerical Weather Prediction (NWP) data as images, but only limited amount of observation data is processed automatically into tailored products. Meteorological service products, such as the daily minimum and maximum temperature forecasts, 24h precipitation forecasts and TAFs are made subjectively by interpreting the displayed information from NWP outputs and selected internet sources. DHM provides also mountain weather forecast for the Annapurna region and Terminal Aerodrome Forecast (TAF) services to the Tribhuvan International Airport. At the domestic airports METAR and SYNOP observations are available for civil aviation. DHM weather services use global NWP forecast charts displayed on internet browser as guidance from a global model (GFS).

Since most of the observation data is not collected in real time, the local observations cannot yet be benefited in operational numerical forecasting. Except of some observations (from ca. 15 AWSs) displayed at the Web-page no major automated production line exists to customers.

\(^{10}\) For more information please visit: http://brch.dhm.gov.np/
Enhancement of the production process for meteorological services at DHM

During the course of the BRCH project meteorological and hydrological observation networks will be significantly enhanced; baseline synoptic observation network will expand to about 93 automated meteorological stations of which 3 are specialized aeronautical, 29 agrometeorological, 5 snow & glacier monitoring sites and the rest 56 are ‘multipurpose’ stations. Additionally there will be 94 hydrological stations with telemetry measuring predominantly river state (water level and/or flow rate).

The existing conventional climate monitoring and precipitation stations will be gradually equipped with mobile communication devices to send the observation to the DHM database in near real-time. In addition one upper –air a lightning detection network covering the country and one weather radar is currently being acquired. Consequently the high resolution WRF model will be transferred to a High Power Computing platform and be run with increased resolution of 1.5 km.

Recently a limited-area Weather Research and Forecasting (WRF) model (version 3.4.1.) has been installed at DHM and run semi-operatively 4 times a day. The local domain covering the area of Nepal is run with 4 km resolution with length is 72 h (3 days) and using boundaries from the first phase WRF run with 12 km resolution and initially from the global GFS (Global Forecasting System) model available from NOAA.

The renewed integrated process for data management, processing and tools for product generation is illustrated in Figure 1. The meteorological input data indicated on the left is ingested and entered into the database or file servers. Data from local observation networks will go through a Quality Control (QC) procedure before storage into the data database. In addition, external observation data e.g. from the Global Telecommunication system (GTS) or other observation networks are stored in the same data base. The database also contains information of the station meta-data. Also lightning detection and sounding data are stored in this data base.

File based binary data such as Weather radar images, weather satellite data and Numerical Weather Prediction (NWP) grid data is processed separately and stored in file servers. Modelling of river state will be carried out by dedicated model to estimate river flow rate and water level along the selected river basins. Both meteorological and hydrological forecast model output data and other hydrological data is proct processed as part of a separate consulting package to bring the data in useable form for display and product generation on the workstation. Extracts from numerical forecasts for surface parameters will be generated and stored in the database as ‘point’ data representing surface station locations thus allowing for comparison with surface observations and to perform verification of NWP forecasts. These data can be also used in the future to develop tools to improve the ‘point forecasts’ at station locations by applying the Kalman filter and/or Model Output Statistics methodology.
Figure 1: Illustration of the enhanced DHM production process in which meteorological data, acquired from different local observation systems and international sources, flows through various data processing stages and is finally transformed and delivered as value added products to end-users. The orange boxes and circles denote the subject of this procurement.

After storing surface observations to the database, the basic observation data is further processed to derive specified variables (e.g., statistical values, potential evaporation, drought index, precipitation accumulation, etc.), ingested by the workstation(s) and finally transformed into specialized graphical data products according to user needs.

Scope of assignment

The objective of this procurement is to acquire a hydro-meteorological workstation and production system to modernize DHM’s Hydro-Meteorological services. The tools of the workstation shall allow the meteorologist or hydrologist to obtain situational understanding of the present and near future weather and hydrological conditions to issue forecasts and various warnings for the next hours up to several days depending on the length of forecast data available from the numerical weather prediction and hydrological models.11

11 Note that the numerical weather and hydrodynamic models are run on separate computing platforms. The workstation only uses the output data from Weather prediction Models (NWP) and Hydrological Models.
State-of-the-art meteorological workstations and production systems for providing weather services are commercially available from dedicated suppliers. On the contrary, fully integrated workstations to meet all needs of both meteorologists and hydrologists are rare to find. Nevertheless, it is the objective of this procurement to specify and realize features, within limits of this procurement, to design a workstation that benefit also hydrologists in their operative work.

The workstation will be designed to visualize all available situation data in various spatial and temporal scales, control or edit individual data elements manually or by using script based macro/ API language, e.g. to calculate derived variables or prepare products for visualization on the customer platforms. Different types of graphical illustrations of data, such as temperature isotherms, isobars and wind vectors, shall be easily over-laid to enhance the situation analysis as demonstrated in Figure 2.

Figure 2. Demonstration of a typical view on a workstation screen showing a NWP model forecast for surface air pressure (black isobars), precipitation (coloured zones), satellite image (grey zones) and observed air temperature (2m height; coloured numbers according to temperature reading). Past and future weather conditions can be readily studied e.g. by rolling with the mouse or pointing on the time bar at the bottom of the user interface. Time step (here 1 h) is selectable.
The workstation will allow NWP forecasts from different models be compared side by side for comprehensive assessment of the uncertainties in the forecast. Processed data and products generated with the workstations and automated production generation tools can be further relayed in different media and sent to customer data bases such as AMIS, Internet or to the Global Telecommunication System, GTS. Some advanced products, requiring human assessment and expertise, such as early warning messages, need to be generated with semi-manual (computer assisted tools) by the forecaster.

The servers will be installed and maintained at the National Information and Technology Center in Kathmandu, workstations are delivered to the forecasting center at Tribhuvan Airport, Early Warning Operative Center (EOC) at DHM Headquarter and Regional offices. The structure of the Wide Area Network and capacities of the data lines between the units are shown in Figure 3.

![Figure 3. Capacity of data communication between DHM offices and the National IT Centre (NITC).](image)

**Use of workstation by meteorologists**

The workstation shall include tools to prepare general weather service products for the public weather services and aeronautical meteorological services. Products include weather maps with symbols and observed/forecasted values, tables and meteograms showing the continuous progress of weather for the next couple of days at a selected location. The product generation will be mostly automated so that the prepared products will appear readily on the DHM web-pages and mobile platforms. Products for agrometeorological services are predominantly produced automatically and transferred to a client’s server. The product portfolio can be continuously increased as the users learn how to use the system.
Use of workstation by hydrologists

The workstation will include features that benefit hydrologists in their operative work. With the Graphical Interface of the workstation user can view hydrological parameters generated by the integrated production system e.g. output data from hydrological observation network, basin scale river flow and output from other hydrological models can be ingested to the workstation once the data has been entered in appropriate format for the workstation. These parameters include river flow rate and water level at observation station locations, precipitation and snow accumulation for various time and spatial scales (i.e. QPE and QPF), potential evaporation, evapotranspiration, surface soil moisture and global solar radiation measured or derived from agrometeorological station data. Based on this data one can assess e.g. the risk of drought, forest fire, avalanches and landslides once the appropriate methods for estimating the risks are developed. For model output parameters both gridded or station point values can be displayed and processed as applicable. Furthermore, hydrologists can use the Warning Tool to issue and display flood warnings, which the workstation warning tool will convert in a standard warning message format (CAP).

With help of the hydro-meteorological workstation and automated production system, it is expected that DHM will be able to significantly enhance its provision of meteorological, agro-meteorological, hydrological forecasts, and assess risk of dangerous events to issue warnings. The hydro-meteorological workstation represents the final part of the integrated production process starting from handling observation data from the hydrological and meteorological stations, running forecast models and storing the data to file servers and data base and finally to be finally ingested to the workstation for viewing and generating services products.

\[ Data \text{ formats compatible with the workstation are listed in ch. 3 below.}\]
1. General requirements for establishing the production system

Instructions

The specifications given below are by default minimum requirements allowing the bidder to add more features or better quality. For each Item the bidder is required to systematically quote "Comply" if the all features given for the Item are included and add a Comment if the feature deviates in some minor aspect from what is specified.

"Not Comply" If the Item is not included or deviates significantly from what is specified.

For Items marked with ‘Desired:’ the bidder shall quote either

"Available & included’ meaning that the Item is available, comply with the given specification and is included in the quoted price. (PLEASE NOTE THAT QUOTING THIS OPTION DOES NOT GIVE ADVANTAGE WHEN SELECTION OF THE BIDS).

or

‘Available & Not included’ meaning the Item is available, but only with additional price;

or

“Not available”.

For all items for which the bidder has quoted COMPLY or AVAILABLE & INLCUDED detailed information shall be given or a reference with Document name and page/chapter number.

1.1 Scope of the project

Through this project the supplier shall tune its readymade software, install, test and commission a hydro-meteorological workstation and production system for use by DHM meteorologists and hydrologists (hereafter ‘forecaster’) with the content and functional features described in detail in the specifications below. The supplier shall provide the hardware, data ingest and software consisting of a Graphical User Interface (GUI) and automated generation of products to appear on internet pages and mobile devices.

All these activities forming part of the project shall be included by bidder in the cost price of respective Items and no separate payments shall be made for them unless specified explicitly in the schedule of Goods and Related Services.

The data ingest for the production system shall rely on the newly established enhanced observation networks, ICT infrastructure with observation database, file servers, data management of DHM and supplier’s best practice to select the available external data sources.

Necessary hardware with server(s) and remote workstations shall be based on the minimum
requirements and/or as per supplier’s best practice. Upon commissioning of the system the supplier shall provide DHM with comprehensive training of staff, and on-line support with software and system data updates for 5 years.

1.2 Selection of data sources
The supplier propose, available meteorological, agrometeorological and hydrological data for use by the production system and also propose any additional sources required to meet the minimum requirements. Locally produced observation data such as from surface observation stations, upper air sounding station, lightning detection network and NWP data from the WRF NWP data will be made available through the DHM renewed data management system.

1.3 Design principle
Based on the specifications given in this document, the supplier shall submit a project plan which describes the design of the system architecture, hardware needed, data ingest, processing and storage functions, the Graphical User Interface (GUI) and automatic generation of products to be displayed at DHM web pages and at mobile devices.

1.4 The production system shall be well integrated into the newly established enhanced ICT infrastructure of DHM and provide operational capability of the workstations distributed across regional offices of DHM in Nepal.

1.5 The system architecture shall support a traditional client/server relationship. The main client i.e. the user is the forecaster who will work at the workstation with a Graphical User Interface (GUI).

1.6 The supplier shall evaluate and propose the best location for the server(s) being subject of this bid taking into account that DHM will concentrate the High Power Computing System and data bases at the National Information Technology Center (NITC) which provides cooled space for the server(s).

1.7 For the purpose of this tender the bidder shall give an offer for 15 workstations of which 8 will be within the DHM 100 Mbps network (DHM Head Quarter building and at the Tribhuvan Airport Office) and additional 7 workstations in other cities outside Kathmandu valley having about 10Mbps data-line connectivity as illustrated in Fig. 3. The final number of workstations and their locations will be decided at the time of contract negotiations. The supplier shall test the data line connectivity between the server(s) and workstation user sites.

1.8 The supplier shall specify the hardware for the server(s) and workstations according to supplier’s best practice and taking into account the capacity required by the software,
visualization, data management and system redundancy. Minimum requirements for the hardware are given under Item 8.

### 2. Software architecture

The system architecture shall support a traditional client/server relationship. Key attributes shall include, but not limited to:

| 2.1 | Main server(s) to perform automated data i/o, data processing and storage. The resources & data at the main server will be linked via internet and/or cloud server with approximately 15 remote workstations (PC’s) located at the DHM Head Quarter, Airports and provincial offices. |
| 2.2 | High performance data services with automatic data updates; Plug-and-play adaptable to a variety of data types as specified below. |
| 2.3 | Graphical User Interface (GUI) to provide tools and features to allow for the forecaster to obtain situational awareness and decision-making with visualization and processing of data that is adaptable to the standard use cases of the DHM services; |
| 2.4 | Customizable visualization that give the user flexibility to create and save completely tailored view settings on the data; |
| 2.5 | Handling and Issuing simultaneously a number of Early Warnings using a GIS interface, tailored to produce standard XML code in compliance with the Common Alerting Protocol standard (CAP, v. 1.2) |
| 2.6 | Software for Automatic generation and dissemination of tailored graphical and textual products such as hydro-meteorological observations, forecasts and warnings, displayed as charts, graphs and tables at the DHM web pages and mobile devices; |

### 3. Data ingest and processing

The function shall provide ingest of all relevant meteorological, hydrological and related data brought in to recognizable format for the production system and refines it through data processing. First, raw data is ingested, decoded and stored, then routed through Viewing, Editing and Storing to generation of end products. This function shall include the following functionality and requirements:

#### Data Decoder

| 3.1 | The Data Decoders shall decode raw data into formats for use of the system in data fusion, geo-location, and storage of data for use by other system functions. A framework shall be provided for the end user to add custom decoders to decode unique customer data-types. |
The system shall decode at least the following data Formats and Types:

3.2 **Radar data:**
Level II and III; SIGMET; GRIB 1&2, BUFR, GeoTIFF

3.3 **Satellite data:**
- GRIB 1&2; XPIF; MPEF; HDF- 4 / 5; LRIT; HRIT;
- Desired: NETCDF

**Suppliers:**
- FengYunCast Asia products
- Japan Meteorological Agency (JMA) satellite products
- Global precipitation Monitoring (GPM)\(^1\) products

**Desired:** Type of products:
- Visible and IR products
- Automated Cloud classification product
- Other Precipitation intensity products relevant for the region
- Upper air winds product

**Desired:** Other suppliers:
- INSAT products
- NOAA GEONETCAST products;

3.4 **NWP model data formats:**
- GRIB 1 & 2; NetCDF; BUFR; HDF; **Desired:** Vis5D

**NWP model data:**
- Local WRF- model (2-domains available)
- GFS global model (highest resolution available)
- Other NWP data as available

**Desired:** other model data:
- IMD (India) NWP products
- NCMRWF (India) products
- CMA (China) products (MICAPS data)
- JMA (Japan) products

\(^1\) https://pmm.nasa.gov/data-access/downloads/gpm
<table>
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<th>Section VII Schedule of Requirements</th>
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<tr>
<td><strong>Meteorological Workstation and Automated Production System</strong></td>
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<tr>
<td><strong>ECMWF (Europe) surface grid data and vertical structure for selected station locations in Nepal (to be negotiated)</strong></td>
</tr>
<tr>
<td><strong>Meteo-France (ARPEGE global model, ARPEGE global ensemble); UK MetOffice Global model</strong></td>
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<tr>
<td><strong>3.5 Alphanumeric data:</strong></td>
</tr>
<tr>
<td><strong>3.6 Lightning data:</strong></td>
</tr>
<tr>
<td><strong>Data formats:</strong> ASCII; XML; SFLOC, EUCLID, SAFIR</td>
</tr>
<tr>
<td>On-line data will be available across Nepal from the local lightning detection system (NOWCAST/Line system): The standard ASCII text files have eight columns separated by a white space:</td>
</tr>
<tr>
<td>• Date of Stroke (UTC, format YYYYMMDD)</td>
</tr>
<tr>
<td>• Time of Stroke (UTC, format HH:mm:ss.SSSSSSS)</td>
</tr>
<tr>
<td>• Latitude, WGS84 (degree, 4 decimals)</td>
</tr>
<tr>
<td>• Longitude, WGS84 (degree, 4 decimals)</td>
</tr>
<tr>
<td>• Height of Stroke (km)</td>
</tr>
<tr>
<td>• Type of stroke (1: cloud-to-ground, 2: inter-cloud)</td>
</tr>
<tr>
<td>• Current of Stroke (kA)</td>
</tr>
<tr>
<td>• 2D-Error (km)</td>
</tr>
<tr>
<td>Example of ASCII Lightning Data:</td>
</tr>
<tr>
<td>20120410 07:12:53.6499025 42.7929 −0.5079 0.0 1 −13.9 0.044</td>
</tr>
<tr>
<td>20120410 07:12:53.6820149 42.7931 −0.5072 0.0 1 −5.7 0.055</td>
</tr>
<tr>
<td><strong>3.7 Image formats</strong></td>
</tr>
<tr>
<td>PNG, JPEG, TIFF, SVG, GIF, GEOTIFF, BMP, FAX, HD5, PDF</td>
</tr>
<tr>
<td><strong>3.8 Geographical formats:</strong></td>
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<tr>
<td>GML; XML; ESRI shape files;</td>
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</table>
DHM will provide shape files for administrative regions and river basins for Nepal

### 3.9 Surface characteristics
- Global terrain data, satellite imagery, digital elevation model, administrative boundaries and related data included in the package
- DHM will provide local land use data and shape files for administrative boundaries, roads, rivers, river basin boundaries, hydro and met station metadata and other related data
- Data shall be scalable from local to global scale as appropriate

### 4. Graphical User Interface (GUI)

The GUI shall provide the following main functional tools:

- Viewing Tool
- Macro /API Language Tool
- Tool to issue hydrological and meteorological warnings using the Common Alerting Protocol (CAP)
- Trajectory Tool
- Data Storing Tool

#### 4.1 Viewing tool

The Viewing tool shall provide for the forecaster a GUI to

- View available (past, present and forecasted) meteorological and hydrological data to obtain comprehensive situational awareness of weather and hydrological conditions using local, regional and global domains and any predefined and/or user specified configuration.
- Contain possibility to freely select any combination of layers with any combination of variables and to display data in various graphical styles and formats. (Freely select parameters from different models and observation types to be visualized overlay them freely in the map view.)

#### 4.1.1 Domain, projection and geographical view set-up features

- Select one of and switch between at least three domains: Global, Regional South-Central Asia and Local (Nepal and immediate surroundings)
- Map projections: Polar stereographic, Mercator,
- **Desired:** Transverse Mercator
- **Desired:** Switch between different map projections. The data displayed on the map shall be automatically adjusted to different map projections without closing the current program window
- Interactively select the desired area and a grid of any desired size onto the map
### 4.1.2 Data view set-up features
Select and import data types from various sources (e.g., NWP output data, observation, radar, lightning data and their parameters etc., as demonstrated in the supported data types list)

### 4.1.3 Illustrate data of all available parameters of weather and hydrological observations and post-processed NWP data from selected models (wind field, temperature, precipitation, cloud cover, river flow, water level, etc.) as numbers, symbols, color contours and color fields (as applicable) and interactively select the desired presentation format and color scales of the parameters.
Interactively modify color schemes, line types (smooth, dotted, thickness), size of symbols, text size and color.

### 4.1.4 Overlay the data types over geographical background data using the available map projections

### 4.1.5 Viewing data back and forth in time
Use of a timeline tool to allow for moving backward and forward in time either step-wise by pointing on a specific date & hour or ‘scrolling’ back and/or forth.
Interactively select the desired time step between 1 hour and 24 hours. The program shall automatically interpolate NWP model data into the selected time interval.
Past data (observations and forecasts), should be available for viewing at least up to two weeks backward and continuously updated with the latest data available. Weather and hydrological forecasts shall cover at least up to 7 days forward from present time (as applicable and depending on the NWP model used)
View past, present and forecasted weather, hydrological and user created data made available in standard formats in any predefined and/or user specified configuration such as numbers, symbols, color contours and color fields (as applicable) and interactively select the desired presentation format and color scales of the parameters
Wind data can be viewed as arrows, wind barbs and as stream lines

### 4.1.6 Viewing modelled or analyzed grid values and observation point values on a map view
Possibility to select points or grid squares of interest based on station metadata and/or topographical features and/or data values.
Ability to view all or a selected number of parameters.
Mouse-over feature (Off/ON) to show values for a location pointed by the mouse symbol
SYNOP plot illustrating all parameters of the SYNOP message for a selected time and of observation location(s)
<table>
<thead>
<tr>
<th>Section VII Schedule of Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Display data from a network of selected station types (aeronautical, agrometeorological, hydrological, climatological, precipitation etc.) on a map background showing selected variables around the station points.</strong></td>
</tr>
<tr>
<td><strong>Filter selected observation data by pre-defined conditions</strong></td>
</tr>
<tr>
<td><strong>4.1.7 Creating Tables and Graphs</strong></td>
</tr>
<tr>
<td>Ability to interactively create tables and graphs on an additional window for selected stations and time period showing real time observations and long term Hourly, Daily Max, Min &amp; Average etc. values as available from the observation data base.</td>
</tr>
<tr>
<td>The Tables and Graphs should be fully configurable as per styles, lines, symbols, axis’ etc.</td>
</tr>
<tr>
<td>Tables shall contain a Sorting feature to list stations in ascending or descending order according to any parameter of their metadata and/or of observation data.</td>
</tr>
<tr>
<td>Ability to create and store default settings for the Tables and Graphs that will automatically appear and be updated on the DHM Web pages;</td>
</tr>
<tr>
<td><strong>Desired:</strong> The Map view and the Table/Graph view of selected stations and their observation parameters should be interactively connected, i.e. the observation in the table selected by the mouse appears highlighted on the map, and vice versa</td>
</tr>
<tr>
<td><strong>4.1.8 Video mode</strong></td>
</tr>
<tr>
<td>A tool to set-up a video on any series of views by setting the time step, starting and ending time.</td>
</tr>
<tr>
<td><strong>Desired:</strong> Ability to create and store default settings for the Videos that will automatically appear and be updated on the DHM Web pages;</td>
</tr>
<tr>
<td><strong>4.1.9 2D graphs and analyses</strong></td>
</tr>
<tr>
<td>Create Meteograms and Hovmöller (vertical time series) diagrams at selected points of interest with free selection of the display formats (contours, colored zones, grid values, wind barbs, wind arrows, stream lines etc.).</td>
</tr>
<tr>
<td>Create vertical cross sections between any two selected locations. User hall be able to overlay parameters and select what model(s) are displayed in the cross section tool.</td>
</tr>
<tr>
<td>Ability to create and store default settings for the 2D graphs and map views that will automatically appear and be updated on the DHM Web pages;</td>
</tr>
<tr>
<td>View Temp diagram (Tephigram. Skew-T and/or Emagram) from both observations (balloon sounding or AMDAR) and NWP data. Standard indices (e.g. for atmospheric stability) are calculated automatically and can be viewed on the side of the diagram.</td>
</tr>
<tr>
<td><strong>Desired:</strong> Possibility to dragging the profile line(s) with automatic recalculation of derived sounding parameters e.g. to study likelihood for development of convection.</td>
</tr>
</tbody>
</table>
### 4.2 Macro language tool/ API tool

The software shall include a macro language/API tool (hereafter ‘Macro tool’ or ‘Macros’) to assist in data viewing, processing, prepare tailored software enhancements, calculation of statistics from station point and grid data, automated generation and delivery of end products. The macro tool shall (but not limited to) contain the following functions/features:

| 4.2.1 | Tool to create Macros with given syntax to create standard mathematical equations/algorithms (summing, subtracting, multiplying etc.) to allow for calculation of derived parameters, filter data etc.  
For example, calculation of accumulated precipitation totals (over 6, 12, 24, 48 etc. hours) and display the results on a map plot or as time series. |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2.2</td>
<td>User shall be able to select the time steps &amp; period and/or any pre-set administrative area (within Nepal) to be used for calculation.</td>
</tr>
<tr>
<td>4.2.3</td>
<td>Simple editing: Ability to change calculation result(s) to prepare service products, e.g. the value of Max or Min temperature for a specified administrative areas, station points etc., for the next day.</td>
</tr>
<tr>
<td>4.2.4</td>
<td>Create script code (Macros) to apply threshold values that will activate a macro/API or to highlight given administrative/warning areas or time periods (useful e.g. when identifying risk of extreme events);</td>
</tr>
<tr>
<td>4.2.5</td>
<td>Use of Macros (as applicable) to generate service products and to control transfer of products to service platforms.</td>
</tr>
<tr>
<td>4.2.6</td>
<td>Macros shall have specified syntax with checking feature for mathematical formulas to easy out their use.</td>
</tr>
<tr>
<td>4.2.7</td>
<td><strong>Desired</strong>: Macros allow of comparison of numerical forecasts against observations at selected station points by applying simple methods such as e.g. difference between observations and the corresponding forecasted variable representing the station point.</td>
</tr>
</tbody>
</table>
| 4.2.8 | **Desired**: Linkage of Macros with the Warning tool, E.g. :  
- Automatically generated guidance on the screen to delineate severe phenomena displayed on the map view or timeline view.  
- Ability to calculate indicators of severe phenomena using forecast data for the pre-set warning regions.  
- Highlight pre-set warning regions with appropriate warning color & symbol according to threshold values set-up for different warning types. |
4.2.9 Undo/Redo operations.

4.2.10 Macros created can be stored to personal and/or group user profile for further use.

4.3 **Trajectory tool**

4.3.1 Calculation and Visualization of trajectories: Calculate, based on selected NWP model track of assumed buoyant substance (e.g. smoke or ash) as forward and backward trajectories based on selected point, assumed source elevation, time of emission start /arrival time. **Desired:** Include scattering of results (dispersion) as applicable.

4.4 **Data storing tool**

The Data Storing tools shall enable the user(s) to save and retrieve the following data:

4.4.1 Macros for a general, group or user specific library. Copying Macros between libraries

4.4.2 Settings and actual products for tailored graphics, tables and animation

4.4.3 Settings and final products for automated production

4.4.4 Save all issued and received warning (CAP) messages with title indicating the warning type & warning identifier.

5. **Warning tool**

The warning tool shall be linked with the (GUI) and Macros to issue hydrological and meteorological alerts, warnings, and advisories (hereafter ‘warnings’) using message format that conforms to the Common Alerting Protocol (CAP) standard (**Desired:** version 1.2)\(^4\). Products generated with this tool under control of the forecaster are CAP messages, warning charts and tables delivered via selected media to the general public, disaster management stakeholders and pre-defined focal points at the vulnerable areas. The warning tool shall allow for, but not limited to, the following general functionality:

5.1 The bidder shall provide software for a Warning Tool linked with the GUI (and Macros as applicable) such as to provide the forecaster an efficient way to enter appropriate content to the **segments** and **elements** of the CAP structure for each warning.

5.2 The tool shall enable the forecaster to handle (set-up, edit, view) multiple warnings simultaneously for pre-defined regions (counties, districts, river basins or sub basins etc.)

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### Section VII Schedule of Requirements

**5.3** The tool shall enable sending and receiving warning information coded by using Common Alerting Protocol (CAP).

**5.4** The warning tool shall contain local set-up of features for issuing and disseminating warnings as follows (but not limited to):

1. List of recipients of CAP messages (to be fine tuned with DHM) containing person/organization, email address and mobile phone no., level of priority, etc.
2. Set-up of warning ‘meta-data’:
   - **Acronym** for **Warning categories used** (MET, HYDRO, GEO, etc.) and for each category:
     - Name of **Warning Types used** (e.g. ‘storm warning’, ‘heavy rain warning’, ‘flood warning’ etc.) and for each **Warning Type**:
       - **Names** of predefined **Warning Areas** for the specific **Warning Type**, linked with the shape files of the corresponding areas
       - **Indicator** for <severity> of the **Warning Type**, e.g. ‘12h precipitation accumulation’
       * **Thresholds** for <severity> corresponding to Levels 0-3 for the given warning type (e.g. <20, >20, >50, >100 mm, respectively)
     - **Desired**: Thesholds for <awareness> (see 5.13b)
   - **Desired**: To ease out changes in the local set-up of warning parameters, the warning tool should contain a widget to view and edit the parameters and indicators listed above;
3. An interface to enter/update situational warning information for the relevant CAP <segments> and <elements>;
4. A time line to specify effective time periods and risk levels for the CAP awareness sub-categories: ‘urgency’, ‘severity’ and ‘certainty’ (see 5.13a);
   - **Desired**: inclusion an additional category <awareness> (see 5.13b);
5. A map view controllable (to be decided by supplier’s best practice) by forecaster showing predefined warning areas for selected warning types, awareness colors, threshold values, and warning symbols as applicable;
6. A graphical 2D table view listing warning areas (rows) with issued warnings (including awareness colors and symbols) along a step-wise time line (columns) with selected time step (6h, 12h, or 1st day, 2nd day etc.);
7. A text generator and editor to automatically compile text (English and Nepalese) from selected <segments> and <elements>. The forecaster shall be able to edit and add textual information as necessary.
<table>
<thead>
<tr>
<th>5.5</th>
<th>Visualization of warnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The system shall be able to create visualization of warnings by displaying a summary of active warnings in Table form and as Chart(s) displaying the warning areas on a map background.</td>
</tr>
<tr>
<td>2.</td>
<td>The Table shall contain the warning type, valid periods with awareness level(s), warning symbols and name of the warning area.</td>
</tr>
<tr>
<td>3.</td>
<td>The Warning map shall display valid warnings for the defined period, warming/predefined administrative areas colored according to awareness level and marked with a symbol associated with the warning type.</td>
</tr>
<tr>
<td>4.</td>
<td>The map view shall be zoomable with topographic and land cover features.</td>
</tr>
</tbody>
</table>

| 5.6 | The map visualization and warning table can be stored for further use by automated product dissemination e.g. to responsive web pages and mobile devices. |
| Desired: | The appearance of features in the warning map view or in the final product warning map shall be editable, e.g. (but not limited to) symbols can be removed or added. |

| 5.7 | The tool shall support end-to-end authentication and validation of all messages |

| 5.8 | The tool shall provide a unique identifier (e.g. an ID number) for each warning message and for each message originator as specified in the CAP standard; |
| Desired: | The CAP messages shall be able to trigger diverse sensor and dissemination systems including both TCP/IP-based networks and one-way "broadcast" channels; |

| 5.9 | Message structure |
| The CAP alert/warning message consist of Required (boldface) and Optional/Conditional (normal face) segments and elements as shown in the scheme below: |
| Note: | the content given below for the Segments and Elements of the CAP code shall be treated as initial guidance on how to configure the Warning Tool. Final settings for the warning tool will be decided upon contract negotiation with DHM and the selected supplier. |
5.10

Here ‘Mandatory’ means that the corresponding element (shown as boldface) is REQUIRED to be included in each alert message. Other elements (normal face) are either OPTIONAL or CONDITIONAL. The warning application must have readiness to use all segments and elements listed above.

The segments and elements which are specific for this application and to be configured for use by DHM are explained in more detail below. Reference is made to the CAP-v1.2-PR03 manual for detailed definition and syntax of all elements included in the CAP standard.

5.12 <alert> segment

The <alert> segment provides basic information about the current message: its purpose, its source and its status, as well as a unique identifier for the current message and links to any other, related messages. An <alert> segment may be used alone for message acknowledgements, cancellations or other system functions, but most <alert> segments will include at least one, but often many <info> segment(s).
The `<alert segment>` includes the following elements:

- `<identifier>`, identifying the alert message (REQUIRED)
- `<sender>`, identifier of the sender (REQUIRED)
- `<sent>`, time and date of the origination of the alert message (REQUIRED)
- `<status>`, code denoting appropriate handling of the alert message (REQUIRED), possible values: “Actual”, “Exercise”, “System”, “Test”, “Draft”
- `<scope>`, code denoting intended distribution of the alert message (REQUIRED), possible values: “Public”, “Restricted”, “Private”,

Other parameters for this segment are either (OPTIONAL) or (CONDITIONAL) and defined in the CAP manual.

### 5.13a `<info>` segment

The `<info>` segment describes an anticipated or actual event in terms of its urgency (time available to prepare), severity (intensity of impact) and certainty (confidence in the observation or prediction), as well as providing both categorical and textual descriptions of the subject event. It may also provide instructions for appropriate response by message recipients and various other details (hazard duration, technical parameters, contact information, links to additional information sources, etc.). Multiple `<info>` segments may be used to describe differing parameters (e.g., for different probability or intensity “bands”), to provide the information in multiple languages or to issue a warning on multiple areas.

- `<language>`, code denoting language of the info sub-element of the alert message (OPTIONAL); suggested values: “English”, “Nepalese”
- `<category>`, code denoting the category of the subject event of the alert message (REQUIRED); relevant categories in the Nepal context are:
  - “Met” – Meteorological (thunderstorm, etc.)
  - “Hydro” – Hydrological (River Flood, Drought, Glacier Lake Outburst Flood, Avalanche)
  - “GEO” – Land slide
- `<event>` text denoting the category of subject event of the alert message (REQUIRED)

These are the warning types used by DHM to signify the warning type, such as warnings for:

- Thunderstorm, Strong wind, Wind gusts, Fog / low visibility, Heavy Snowfall, Heavy Rainfall, Blizzard, Sleet deposit, Clear Ice deposit, Icy roads, Temperature drop, Frost,
Cold wave, Heat wave, Drought, Risk of Forest Fire, Drought, River flood, Flash flood, Avalanche, Glacier Lake Outburst Flood.

Each (approved) warning type shall be associated with a number of predefined parameters such as: <areas>, <languages>, <threshold to trigger a certain ‘severity’ level>, <default start and end time of effectiveness of the warning, from present>

The default values for the parameters shall be prepared in cooperation with the DHM personnel and the ongoing consultancy work on creating the end-to-end warning system for two pilot river basins in Nepal.

<response type>, group listing denoting type of action recommended (by the disaster Management Authorities) for the target audience (OPTIONAL). See examples of automated texts specific for a certain warning given in the CAP manual.

<urgency>, (REQUIRED) having values such as

“Immediate” – (Level 3) Responsive action SHOULD be taken immediately;
“Expected” – (Level 2) Responsive action SHOULD be taken soon (within the next few hours);
“Future” – (Level 1) Responsive action SHOULD be taken in the near future;
“Past” – (Level 0) Responsive action is no longer required;
“Unknown” -Urgency not known.

<severity>, (REQUIRED), having values such as “weak”, “moderate”, “sever” and “extremely severe”

GREEN CODE / Level 0: “weak”
No hazardous weather forecasted.

YELLOW CODE / Level 1: “moderate”
Conditions are potentially dangerous, forecasted phenomenon is of moderate intensity, but can be dangerous and cause accidents. People are instructed to follow advisories and practice caution.

ORANGE CODE / Level 2: “severe”
Conditions impose real danger; strong phenomena with high intensity are forecasted, the situation can hinder the socio-economic activities and can cause material damage and be dangerous for people in the area. Close follow-up of the warnings and advisories by disaster management personnel is endorsed. People in the warning area are advised to seek shelter and protect their property.
**Section VII Schedule of Requirements**

<table>
<thead>
<tr>
<th>RED CODE / Level 3: “extremely severe”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dangerous conditions are expected; a natural hazard with extreme intensity is forecasted, severe material damage and human casualties are possible unless properly protected. There is the possibility of issuance of exceptional situation (e.g., evacuation of inhabitants) for the danger zone. People in the warning region shall follow instructions of disaster management personnel and seek for shelter.</td>
</tr>
</tbody>
</table>

<certainty>, code denoting e.g. probability of the occurrence of the subject event (REQUIRED) scaled as (the thresholds and phrases below will be finalized in co-operation with DRM stakeholders):

<table>
<thead>
<tr>
<th>Threshold</th>
<th>Phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10%</td>
<td>(level 0) “occurrence is unlikely”</td>
</tr>
<tr>
<td>11-50%</td>
<td>(Level 1) “occurrence is possible”</td>
</tr>
<tr>
<td>51-74%</td>
<td>(Level 2) “occurrence is very likely”</td>
</tr>
<tr>
<td>75-100%</td>
<td>(Level 3) “occurrence is almost certain”</td>
</tr>
</tbody>
</table>

5.13b Desired (not included in CAP 1.2):

<awareness level> calculated as an average of the assigned “Level” values set for <urgency>, <severity> and <certainty> above. The used thresholds and phrases below will be finalized in co-operation with DRM stakeholders:

- Risk level < 0,33 “No risk”
- Risk level = 0.33-1.00 “Small risk” follow situation and be prepared
- Risk level = 1.01-2.00 “Moderate risk” prepare and practice caution, go to shelter
- Risk level > 2.00 “High risk” protect property and keep sheltered

Other parameters for the <info> segment are introduced in the CAP manual

5.14 <Resource> segment

The <resource> segment provides an optional reference to additional information related to the <info> segment within which it appears in the form of a digital asset such as an image (warning symbol) or an audio file.

5.15 <Area>segment

For each warning type the tool shall have predefined areas for which the warnings are issued. These regions shall be at least, but are not limited to:

1. Administrative regions, Provinces, Towns, Municipalities, etc.
2. Agricultural districts
3. River basins and sub-basins
4. Lakes, Glacial lakes
5. Major trekking areas/routes

The DHM will provide standard shape files that delineate the warning areas. The system administrator shall be able to insert new/delete existing regions /areas.
<table>
<thead>
<tr>
<th>Section VII Schedule of Requirements</th>
</tr>
</thead>
</table>

### 5.16 Dissemination of CAP messages
- The tool shall contain features:
  - to display warning information on the DHM web pages and mobile devices
  - send email to predefined addresses
  - send text msg to predefined list of mobile devices
  - send as RSS feed

**Desired:** The CAP messages shall be able to trigger diverse sensor and dissemination systems including both TCP/IP-based networks and one-way "broadcast" channels;

### 6. Tools for aeronautical weather services

The software and products marked as ‘ICAO’ shall be fully compatible with ICAO Annex III requirements for Aeronautical Meteorological Services

#### 6.1 Display can be set-up by Macros/API for standard views of aeronautical data:
- Observations at airports: e.g. wind (kt), visibility(m), cloud types & cloud height;
- Map view for aeronautical variables (observations & any available forecast)

#### 6.2 Meteograms for airports (editable by Macros/graph settings)

#### 6.3 The views above can be stored as products to be delivered to various media (Web pages, Mobile APP, etc.)

#### 6.4 ICAO: Terminal Aerodrome forecast (TAF and TREND); specification:
- Template to fill-in new TAF, automatically checking message syntax
- Automated follow-up of validity of TAFs against METARs (e.g. change of txt color when given thresholds are exceeded)

#### 6.5 ICAO: Aviation Weather Report (METAR/SPECI):
- Allowance to extend METAR with TREND forecast (based on communication between observer and forecaster)
- Automated follow-up of TREND (same features as with TAF)

#### 6.6 ICAO: Significant Meteorological Information (SIGMET, AIREP, SPECIAL AIREP (ARS), i.e. coded warning message types with given syntax);
- Template to fill-in elements of SIGMET; AIREP and AIREP SPECIAL following the specified syntax;
- Delineate SIGMET/AIREP warning area as a polygon (e.g. using the SWC tool, 6.7).

#### 6.7 ICAO: Significant Weather Chart (SWC) for the domestic FIR;
- A graphical tool with map background and tools to insert significant weather information as symbols, front-lines, numerical values etc., specific rules apply
### Section VII Schedule of Requirements

| 6.8 | Significant Weather Chart (SWC) on-route vertical cross section forecast chart for the domestic FIR between departure and destination airports;  
A graphical tool with topography as background allowance to insert significant weather information as symbols, front-lines, numerical values etc., specific rules apply up to the cruising level of aircraft. |
|-----|-----------------------------------------------------------------------------------------------------------------|
| 6.9 | **ICAO:** Ability to visualize, print and disseminate Satellite Distribution System (SADIS) products.  
**Desired:** The workstation has passed evaluation of SADIS compatibility. |
| 6.10 | A user interface to collect and package all relevant products and information to brief the pilots;  
Documents should be readily printable, downloadable, and displayable on secured Web portal |
| 6.11 | **ICAO:** Ability to read and write all ICAO products (if defined) mentioned in 6.4 – 6.9 using ICAO Meteorological Information Exchange Model (IWXXM) |
| 6.12 | **ICAO:** Air traffic services message handling system (AMHS\(^{15}\)) providing ability to transmit and receive IWXXM messages |

### 7. Automated generation of end products

#### 7.1 General requirements

The automated generation of end products shall include (but not limited to) the following tools:

| 7.1.1 | **Weather service platform** for WEB production that enables production of large number of interactive weather products for web distribution. The generation of products should rely on (but not limited to) the tools described as part of the GUI in Ch. 4. |
| 7.1.2 | **Animation generator.** Based on available data the system shall enable customization of animations in spatial view on any observations and forecasted data. |
| 7.1.3 | **GIS Service.** The system shall have the capability to import and export kml, gml, and arc shape files for use in overlaying with weather data. |
| 7.1.4 | **Product Distribution Service,** which shall be able automatically deliver selected graphical and text products for example by fax and email. |
| 7.1.5 | **Script Service** which enables the automation of product creation and distribution. The script service shall include the functionality to trigger scripts based on timed events, data |

\(^{15}\) [http://www.eurocontrol.int/documents/amhs-specification](http://www.eurocontrol.int/documents/amhs-specification)
The basic features of the tools shall include (but not limited to):

7.1.6 The products shall be available in both English and Nepalese language

7.1.7 The end products shall be ready-made into draft final form prior to installation of the system in Nepal.

7.1.8 The visual appearance and contents of automated products shall be fine-tuned in cooperation with DHM and SI during system set-up and commissioning and finalized by the end of the contract period

7.1.9 When the system is running operatively the products shall be generated automatically and in real-time under control by the forecaster.

7.1.10 Modification of forecasted data values appearing in specified automated products shall be editable by the forecaster who can also store the final version before dissemination to customer platforms.

7.2 Products to be published on DHM web pages

The following type of products shall automatically appear in real time on DHM web pages. The products shall be available as files to be published on other media such as e.g. newspapers.

Note: The shown examples are existing designs of products available from the Web. The bidder shall demonstrate and provide products with similar or more content, quality and features.

The DHM web pages will be re-designed to be responsive to allow for viewing the products on variable size of displays and mobile platforms.

7.2.1 Visualization of warnings on potentially severe phenomena

a) A map of Nepal with predetermined warning areas colored according to the issued awareness levels. Including warning symbols and legend to introduce and explain the meaning of symbols and colours (Example 1.). Title to indicate time of issuance and validity/status of warnings

b) Desired: A sequence of maps as displayed described above for consecutive days up to 7 days (tbd) (Example 2).

c) A table showing names of predetermined warning areas, warning symbols, awareness
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level(s) for the next day (Desired: inclusion of next consecutive 7 days) (Example 2)

d) Warning text issued by the forecaster
e) Flood warnings are issued as maps described above and symbols colored according to awareness level placed at locations of observation/forecasted water level.
f) Table showing colored status of awareness, observed and forecasted water level (if available. (Example 3-7.)

Example 1

![Map of flood warnings with colored areas and symbols for different types of warnings.](image)
Example 2. Source http://www.metoffice.gov.uk/guide/weather/warnings

Example 3. Flood warnings

A flood alert system based on real-time river level gauge measurements (circles) and 12 hour rainfall measured at tipping bucket sites (drops) operated by DHM. Flood risk is communicated by color coding (circles) and accumulated precipitation. Real time data from stations is displayed...
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also in table form.


Flood Warnings

Source: http://www.metoffice.gov.uk/public/weather/flood-warnings/#?tab=floodWarnings


See also other country-wise warning maps at http://www.meteoalarm.eu/

7.2.2 General point/ regional weather forecast for major cities, districts and regions in Nepal.

Visualization of weather forecasts as: Charts, tables, meteograms, graphs (including weather symbols) based on edited and/or post-processed NWP data.

Example 1: source: https://www.wunderground.com/np/kathmandu
8. **Mobile Apps to publish weather service products on mobile devices**

The supplier shall develop an Application (App) that can be downloaded to common mobile devices. The App shall contain standard weather information illustrated in clear and informative form.

**Note:** The shown examples are existing designs of products available on mobile devices. The bidder shall demonstrate and provide products with similar or more content, quality and features.

**Example 1.**

8.1 Weather warnings displayed on a map background with warning areas color coded areas and warning symbols. The legend shall explain the colors and symbols used.
8.2 Flood warnings as demonstrated in the examples above

8.3 Standard present and forecasted weather information representing an observation station location nearest to the user or at the desired location in Nepal. The App shall also show a list of the latest locations used.

The observation information shall contain (but not limited to) air temperature, dew point temperature, relative humidity, cloudiness (if available) and visibility (if available), wind speed and direction, ‘feels like’ temperature, precipitation during the past 24 hours, time of sun rise and sun set.

The past weather graph shall contain (tentatively) variation of temperature and 1h accumulation of precipitation for the past 5 days.

The weather forecast for the present day and next two days shall contain (as available) hourly information of cloudiness and type of weather (symbol), air temperature, ‘feels like’ temperature, wind speed and direction and precipitation as probability of occurrence and estimated mm/h.

The weather forecast for the next 4-7 days (TBD) shall contain daily information on cloudiness and type of weather (symbol), average daily temperature (or max and min temperature).

Example 2.
9. General Software requirements

9.1 Support to multiple screens. The workstation software (visualization and editing) shall be capable of supporting multiple screens (at least 4) in order to visualize weather conditions, and perform detailed analysis and edit the data.

9.2 Software license. The bidder shall include in their offer license fees (if any) as part of the on-line support and related services valid for the next 5 years after acceptance of the operational test.

9.3 Preference Settings / Access Controls: the software shall enable system administrators to grant access to all features and tools on both a user-level and group basis.

9.4 Scheduled operations: Automated processes shall be able to run according to a user-created schedule.

9.5 Product Scripting/Script Pallets: The software shall implement a scripting language that records all events as products are built and tasks are completed. The software shall provide capability to record completed scripts in a script list or pallet that can be shared among all users so that the user can execute the script with a mouse click.

9.6 Context Sensitive Integrated Help System: The software shall have an integrated help system.
<table>
<thead>
<tr>
<th>Section</th>
<th>Requirement Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.7</td>
<td><strong>Export Function</strong>: the software will be able to export data in various graphical formats (JPEG, GIF, PNG, BMP, TIF etc.) for their use in daily bulletins, on the webpage, for multimedia and mobile platforms.</td>
</tr>
<tr>
<td>9.8</td>
<td><strong>Macro language/API, as specified in Item 4.2</strong>: The software shall support macro language/API for generating end products and disseminating the products to the DHM webpage, mobile platforms.</td>
</tr>
<tr>
<td>9.9</td>
<td><strong>Maturity of the system</strong>: During the Operational Acceptance Tests, cyclomatic complexity measurements will be evaluated by the Supplier for all modules to ensure that failures due to complexity are reduced. The system shall average fewer than three (3) failures per year in production.</td>
</tr>
<tr>
<td>9.10</td>
<td><strong>Maximum downtime</strong>: The maximum period of time that the system remains inoperative (excluding causes external to the system), should not exceed 1 day per year.</td>
</tr>
<tr>
<td>9.11</td>
<td><strong>Recoverability and redundancy</strong>: In case of a network disconnection while dealing with a service, the system shall restore the work to the same state when reconnected. Key data and products shall be “backed-up” at a frequency commensurate with the rate of change of data and stored safely, securely and in controlled conditions both backup site (for disaster support) and operational site (for quick restore).</td>
</tr>
<tr>
<td>9.12</td>
<td><strong>Authentication and authorization</strong>: An authentication and authorization requirement is any security requirement that specifies the access and usage privileges of authenticated users and client applications. The application shall</td>
</tr>
<tr>
<td>9.12.1</td>
<td>Implement a strong authentication mechanism based on digital certificate and/or passwords;</td>
</tr>
<tr>
<td>9.12.2</td>
<td>Verify the identity of all of its users before allowing them to access its functionality;</td>
</tr>
<tr>
<td>9.12.3</td>
<td>Provide access based on ‘need to know’ principles;</td>
</tr>
<tr>
<td>9.12.4</td>
<td>Allow any user to access any account information of any other user;</td>
</tr>
<tr>
<td>9.12.5</td>
<td>Ensure that only a limited number of users (or roles) should be appointed to grant or change authorizations;</td>
</tr>
<tr>
<td>9.12.6</td>
<td>Allow to automatically email a new user authentication credentials to that customer's email address;</td>
</tr>
<tr>
<td>9.12.7</td>
<td>Not allow one or more users to successfully use a denial of service (DoS) attack to flood the system;</td>
</tr>
<tr>
<td>9.12.8</td>
<td>Lock user account after five successive failed attempts</td>
</tr>
<tr>
<td>9.13</td>
<td><strong>Integrity Requirements</strong>: An integrity requirement is any security requirement that specifies the extent to which an application or component shall ensure that its data and communications are not intentionally corrupted via unauthorized creation, modification, or deletion.</td>
</tr>
</tbody>
</table>
| 9.13.1 | The system shall prevent the unauthorized corruption of data that it sends to

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Meteorological Workstation and Automated Production System

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## 9.14 Security Logging Requirements
An intrusion detection requirement is any security requirement that specifies the extent to which an application or component shall detect and record attempted access or modification by unauthorized individuals.

- **9.14.1** The application shall detect and record all attempted accesses that fail identification, authentication, or authorization requirements;
- **9.14.2** The application shall record all failed attempted accesses;
- **9.14.3** The application shall notify the administrator within 5 minutes of any repeated failed attempted access.

## 9.15 Nonrepudiation Requirements
A nonrepudiation requirement is any security requirement that specifies the extent to which an application or component shall prevent a party to one of its interactions (e.g., message, transaction) from denying having participated in all or part of the interaction.

- **9.15.1** The application shall make and store tamper-proof records of the following information about each transaction performed by user:
  - The contents of the transaction;
  - The date and time when the transaction was performed;
  - The identity of the user.

## 9.16 Privacy Requirements
A privacy requirement is any security requirement that specifies the extent to which an application or component shall keep its sensitive data private from unauthorized individuals and programs.

- **9.16.1** The application shall not store any personal information about the users.
- **9.16.2** The application shall not allow unauthorized individuals or programs access to any stored data.

## 9.17 Security Audit Requirements
A security auditing requirement is any security requirement that specifies the extent to which an application or component enables authorized personnel to audit the status and use of its security mechanisms. The application shall collect, organize, summarize, and regularly report the status (enabled vs. disabled, updated versions) and usage (access and modification) of its security mechanisms including: authentication and authorization; logging; privacy; etc.

## 9.18 Survivability Requirements
A survivability requirement is any security requirement that...
specifies the extent to which an application shall survive the intentional loss or destruction of a component. The application shall not have a single point of failure.

### 9.19 System Maintenance Security Requirements

A system maintenance security requirement is any security requirement that specifies the extent to which an application shall prevent authorized modifications (e.g., defect fixes, enhancements, and updates) from accidentally defeating its security mechanisms.

9.19.1 The application shall not violate its security requirements as a result of the upgrading of a data, hardware, or software component;

9.19.2 The application shall not violate its security requirements as a result of the replacement of a data, hardware, or software component.

### 9.20 Security Vulnerabilities Requirements

A security vulnerabilities requirement is any security requirement that include a set of specific vulnerabilities that shall not be found in the application.

The application shall not be vulnerable to any causes specified in [OWASP Top Ten Most Critical Web Application Vulnerabilities](https://owasp.org/www-community/top-ten/v1.01) guide.

### 10. Detailed hardware specifications

The hardware specifications in this chapter are minimum requirements. The Bidder is encouraged to offer similar or better quality components according to their best practice to fulfil the requirements of system performance and functionality as stated throughout this documentation.

#### 10.1 Server(s) for data collection, storage and automatic production tools:

Two identical servers and server software will be procured. One server functions as operational server and the other as a backup server. Servers should be designed as per supplier best practice, minimum specifications are given below. The servers are installed at the NITC in Kathmandu.

| **10.1.1 System:** | 2 x Intel Xeon Six Core 2.5GHz or better |
| **10.1.2 Operating system:** | 64-bit RedHat or 64-bit CentOS 5 compatible hardware |
| **10.1.3 Random Access Memory:** | At least 64Gb |
| **10.1.4 Hard disks:** | At least 2 x 2Tb with RAID 1 (software or if hw, one with Linux support) |
| **10.1.5 Network:** | Ethernet network card, 1000 Mbit/s |
### Section VII Schedule of Requirements

<table>
<thead>
<tr>
<th>10.1.6</th>
<th>Additional DVD+/-RW device</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.1.7</td>
<td>Optical mouse with mouse pad</td>
</tr>
<tr>
<td>10.1.8</td>
<td>Standard keyboard (English)</td>
</tr>
<tr>
<td>10.1.9</td>
<td>Redundant Power Supply</td>
</tr>
<tr>
<td>10.1.10</td>
<td>UPS unit configured for the Server unit</td>
</tr>
</tbody>
</table>

#### 10.2 Workstations

The workstations are first installed and commissioned at the DHM HQ and used for training of the DHM staff. Final delivery locations and schedule are indicated in Table 1 below. Note that those workstations with final destination outside the 100 Mbs network shall be tested for the ca. 10 Mbs network made available outside Kathmandu. Workstations shall be designed as per supplier best practice, minimum specifications are given below.

<table>
<thead>
<tr>
<th>10.2.1</th>
<th>15 PC computers (workstations) with operating system for visualization, editing and handling warnings supporting simultaneous use of at least 4 (four) 27” displays.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Displays &amp; stands: A total of 16 x 27” (inch) and 17x23” Displays, flat HD resolution connected with the workstations as follows: ('unit' denotes PC + display(s) + 8 stands/pole mounts attachable to the table).</td>
</tr>
<tr>
<td>10.2.2</td>
<td>The Workstations (WS) will have variable amount of displays and stands as follows:</td>
</tr>
<tr>
<td></td>
<td>WS Type a: 4 PC’s, each with 4 x 27” displays; 8 stands to fix 2 displays on top of the other two displays for each PC;</td>
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<td></td>
<td>WS Type b: 6 PCs’, each with 2 x 23” displays;</td>
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<tr>
<td></td>
<td>WS Type c: 5 PC’s with 1 x 23” display</td>
</tr>
<tr>
<td>10.2.3</td>
<td>System: 2 x Intel Xeon (six core, 2.6 GHz turbo boost, 15MB cache in both)</td>
</tr>
<tr>
<td>10.2.4</td>
<td>Operating system: According to supplier best practice</td>
</tr>
<tr>
<td>10.2.5</td>
<td>Random Access Memory: At least 16Gt (4x8 GB) 1866 MHz ECC RDIMM RAM</td>
</tr>
<tr>
<td>10.2.6</td>
<td>Hard disks: At least 2 x 1Tb 3.5” HDD 7200rpm (enterprise class disks), RAID1 (mirrored installation)</td>
</tr>
</tbody>
</table>
| 10.2.7 | Graphics card: NVIDIA Quadro K2000 2GB to support max 4x27” displays with same output format for each display to have the same quality of display and reaction time for
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>10.2.8</td>
<td>N/A</td>
</tr>
<tr>
<td>10.2.9</td>
<td><strong>Network:</strong> Ethernet network card, 10/100/1000 Mbit/s</td>
</tr>
<tr>
<td>10.2.10</td>
<td><strong>Additional (external) DVD+/-RW device</strong></td>
</tr>
<tr>
<td>10.2.11</td>
<td><strong>Optical mouse with mouse pad</strong></td>
</tr>
<tr>
<td>10.2.12</td>
<td><strong>Standard keyboard</strong> (English)</td>
</tr>
<tr>
<td>10.2.13</td>
<td><strong>UPS Unit</strong> Configured for the SW-unit</td>
</tr>
<tr>
<td>10.2.14</td>
<td><strong>Stands/Pole mount:</strong> 8 units, attachable to the table for a 27” display</td>
</tr>
</tbody>
</table>

### 11. System integration requirements

11.1 The Supplier will be responsible for delivering, unloading, unpacking, installing, configuring, pre-commissioning and commissioning all Information System components, including all software components accepted by DHM and hardware meeting the minimum requirements in technical specifications.

11.2 The Supplier is obliged to deliver hardware and related equipment which is new and not previously used. The Supplier should submit a certificate (statement) issued by the Manufacturer or its authorized representative in the Republic of Nepal that these equipment and its integral parts are original products.

11.3 The Supplier will be responsible for the installation of all workstations, server and video wall system to the cable infrastructure. The Supplier is also obliged to properly configure all connections.

11.4 ‘**Commissioning**’ means transition to full operation of the system for visualization, processing, editing, automatic production and archiving of all data on a hot backup server at the National Information Technology Center (NITC) in Kathmandu. It allows for the existing systems to run in parallel with the new system to allow for a seamless transition.

### 12. System design and implementation

- The Supplier shall provide project management, analysis, design, implementation, testing, quality assurance, warranty, technical support in accordance with the specifications for the successful implementation of the System.

- The performance of each phase of implementation shall be documented and
<table>
<thead>
<tr>
<th>Section VII Schedule of Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>12.1 Project management</strong></td>
</tr>
<tr>
<td><strong>12.1.1</strong> The Supplier shall be responsible for the project management.</td>
</tr>
<tr>
<td><strong>12.1.2</strong> The project management team shall include suitable representatives of DHM. The bidder must describe the required roles and responsibilities of the members of the project management team.</td>
</tr>
<tr>
<td><strong>12.1.3</strong> There shall be a project governance team and process, in order to provide strategic guidance and decision making for the project management team. The bidder shall describe the roles and responsibilities of the members of the project governance team.</td>
</tr>
<tr>
<td><strong>12.1.4</strong> The bidder’s proposal shall include a tentative project plan, providing both a work breakdown structure and suggested resource allocation.</td>
</tr>
<tr>
<td><strong>12.1.5</strong> A final project plan shall be provided after the start of the project, and shall be agreed by the project governance team.</td>
</tr>
<tr>
<td><strong>12.1.6</strong> The Supplier shall be responsible for the complete integration of the system, to ensure the desired functionality and performance level.</td>
</tr>
<tr>
<td><strong>12.2 Inventory</strong></td>
</tr>
<tr>
<td><strong>12.2.1</strong> The supplier shall make an inventory of all existing meteorological, agrometeorological and hydrological data sources and their data formats available at DHM including DHM’s access to different NWP output products for use by the workstation.</td>
</tr>
<tr>
<td><strong>12.2.2</strong> The inventory will be considered completed only after the inventory report is reviewed and approved by DHM.</td>
</tr>
<tr>
<td><strong>12.3 System design</strong></td>
</tr>
<tr>
<td><strong>12.3.1</strong> The Supplier shall be responsible for the design of the Information System for visualization, processing, editing and automatic production, with the collaboration of DHM.</td>
</tr>
<tr>
<td><strong>12.3.2</strong> The design of the software should be suitable for DHM activity and specifications for the needed hardware should be proposed to DHM.</td>
</tr>
<tr>
<td><strong>12.3.3</strong> The design document shall address the requirements selected for implementation, at the appropriate level of detail.</td>
</tr>
</tbody>
</table>
12.4 System Implementation

12.4.1 The Supplier shall be responsible for the complete implementation of the system. Start-up service provides delivery, unpacking, installation, connection, including connection to E-Gov. platform, configuration, commissioning, resulting in these all components will pass the Operational Test.

12.4.2 The Supplier shall indicate clearly and fully all responsibilities of the DHM with respect to the implementation, including workforce requirements, locations, environmental conditions, utilities and any other such requirements.

12.4.3 The implementation shall be completed by providing:
- a full "as implemented" document and operation manual for the Workstation and Automated Production System
- a full software user's manual for the forecasters.
- a full software user's manual for the administrators.

12.5 Warranty conditions

12.5.1 The Warranty Period shall cover the first 2 (two) years of operation after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at agreed DHM facility(ies) in Kathmandu and regional offices. (Ref. Table 1.)
- The Supplier shall arrange to repair or replace all items that fail within the warranty period.
- All support requests or calls shall be logged, their status monitored, and the administrators shall have the possibility to review the request log and the status of any request.

12.6 On-line Technical support, related services and license fees after commissioning

12.6.1 On-line services: During the five year period after system commissioning the supplier shall arrange on-line technical support upon request by DHM, when deemed necessary, by e-mail, chat, video or other 'on-line' means. On-line technical support services shall cover the first 5 years (60 months) of operation after completion of a successful Operational Acceptance Test and commissioning of the system.

12.6.2 System updates shall be assisted by on-line support as applicable. The updates shall include at least provision of system software and stationery system data (e.g. GIS, DEM and related data) and system settings. The supplier shall inform DHM when system data...
updates are available. **Desirable:** system updates can be done remotely from supplier’s premises.

| 12.6.3 | The costs for on-line support services, license fees (if any), software updates and system data updates, excluding the warranty period, must be quoted by one up-front charge (lump sum), to be paid in periods (annually) according to term specified in ‘GCC 16.1 and 16.2 Terms of Payments. |

### 13. Training courses

As part of the implementation services delivered under the contract, the Contractor shall be responsible for delivering the following training program, which is broken down into training courses as specified below:

#### 13.1 Specification of Training courses

The competency target for trainees is indicated below for each course.

<table>
<thead>
<tr>
<th>Topic of Training and Competency target</th>
<th>Trainees and number of training days</th>
<th>Number of courses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>13.1.1 Training Course for Forecasters on basic tools and practices of the workstation</strong></td>
<td>DHM Forecasters 2 courses for 5 (five) days for 6 (six) persons per one course</td>
<td>2 (two)</td>
</tr>
<tr>
<td></td>
<td>The trainees should learn at minimum how to view all observed data, compare available NWP model forecasts, tailor their personal view settings, and perform situational assessment of hydro-meteorological conditions at available time and spatial scales.</td>
<td></td>
</tr>
<tr>
<td><strong>13.1.2 Training course for forecasters on advanced workstation features, with emphasis on Data Editing, Warning tools and Tools for specialized services</strong></td>
<td>DHM Forecasters 2 courses for 5 (five) days for 4 (four) persons per one course</td>
<td>2 (two)</td>
</tr>
<tr>
<td></td>
<td>The trainees should learn how to work with NWP outputs to improve forecasts, issue warnings and prepare products for specialized services such as aviation and agricultural services.</td>
<td></td>
</tr>
<tr>
<td><strong>13.1.3 Training course for System Administrators on routine operations and system maintenance</strong></td>
<td>System Administrators 1 course for 5 (five) days for 8 (eight) persons</td>
<td>1 (one)</td>
</tr>
<tr>
<td></td>
<td>The trainees should learn how to administrate the operative and backup functions of the system. They should learn how to install all software and</td>
<td></td>
</tr>
<tr>
<td>13.1.4</td>
<td><strong>Training course for System Administrators on automated display and delivery of products on DHM Web sites and Mobile devices</strong></td>
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<tr>
<td></td>
<td>After training, each administrator shall be able to operate, maintain and troubleshoot all end-products prepared automatically by the system for automatic production and distribution including (but not limited to) WEB pages, the AMIS system and mobile devices.</td>
<td></td>
</tr>
</tbody>
</table>
| | System Administrators  
1 course for 5 (five) days for 8 (eight) persons |
| 13 (one) |  |

### 13.2 Requirements for the training

**Responsibilities of the supplier prior to start of training courses:**

13.2.1 The Contractor shall provide a trainer to prepare for each training course a detailed agenda including topics of training lessons, objective of the learning outcome and a timeline. The trainer shall also indicate the qualification of trainees required to successfully complete the course to meet specified objectives of learning for the course.

13.2.2 The trainer shall provide to DHM in advance documentation on the installed system (hardware and software) and the lecture presentations as reference for the trainees. The documentation shall be provided in English as two hard copies and in an appropriate digital form.

**Arrangements and requirements during training courses:**

13.2.3 The training sessions will be conducted at a venue provided by DHM suitable of visualization, editing and demonstration of automatic production software.

13.2.4 DHM will cover the cost of the venue, refreshments and lunches and provide a data projector/screen at the venue and during the time of training.

13.2.5 The training language will be English. Costs related to training material, travel, accommodation and daily allowance for the trainer shall be covered by the Supplier.

13.2.6 Training hours shall be scheduled between 10:30 am and 16:30 pm with a 45 min lunch break.

13.2.7 The lectures and hands-on demonstrations shall be recorded as live video and handed over to DHM in appropriate digital format.

13.2.8 At the end of the training course DHM will conduct an evaluation to get feedback from attendees on the training. Summary of the evaluation will be provided to the trainer.
### Section VII Schedule of Requirements

13.2.9 The trainer shall arrange each participant to show their competence on learned skills during the last session of training.

13.2.10 The trainer will hand over ‘A certificate of training’ for the trainees indicating the course attended and skills learned.

**Requirements after the training courses**

13.2.11 After each training course the trainer shall deliver a summary report of the course highlighting topics covered, general objectives, and learned skills based on the test results as per trainee with remarks ‘satisfactory’; ‘good’, ‘excellent’.

### 14. Inspections and tests

1. The supplier shall perform functional inspections and tests of the hardware and specialized software components of the System.

2. The Supplier shall provide test plans and test scenarios or scripts to the satisfaction of the Beneficiary.

3. The Supplier shall be responsible for conducting the execution of the tests. The Supplier shall indicate the responsibilities of DHM with respect to testing, including workforce, locations, environmental conditions and any other such requirements.

4. All provided tests services must be performed by qualified personnel for which the Supplier must provide DHM with appropriate certificates.

#### 14.1 Quality assurance tests

14.1.1 The Supplier shall be responsible for the quality assurance process.

14.1.2 The proposal must include the description of the quality assurance methodology, including descriptions of the key artefacts to be produced, and of key software tools to be used.

14.1.3 The quality assurance process must cover all the aspects of the design and implementation of the system, including the design and development or customization of the application components.

#### 14.2 Factory Acceptance Test (FAT)

No inspections are planned at the manufacturer factories.

#### 14.3 Inspections Following Delivery

The following inspections will be carried out:

14.3.1 Verification of compliance of packing lists to contract specifications concerning hardware and software;

14.3.2 Verification of completeness of hardware and software delivery in compliance with packing lists;
### 14.4 Pre-commissioning Tests

In the presence of the authorized representatives of the purchaser, the Supplier shall perform the following tests:

| 14.4.1 | Standard setup tests prescribed by the manufacturer of hardware and software in accordance with the setup instructions. Success criteria: All tests and checks recommended by the manufacturer on hardware/software/networking equipment/equipment are passed. |
| 14.4.2 | Single workstations must be tested for correct function of the installed operating system, capability of running the developed software and accessing the Internet. Success criteria – workstations are functional and can access the Internet; |
| 14.4.3 | Server tests will be divided into two phases. In phase 1, server must be observed servicing “local” needs, serving the belonging workstations with services. Success criteria - During 8 hours, under full duty load generated by workstations there must not be any pause or interruption in providing these services. Phase 2 is test of the work of server in combination with communication components. By doing this the communication channels and the communication equipment will be tested as well. Success criteria - server is able to exchange files with another communication server in client and in server mode, and through Internet. Each phase of the server test must be repeated twice. |
| 14.4.4 | Local cable infrastructure and physical connectivity must be checked simultaneously with computer equipment tests. Success criteria - each workstation receives all network services from server, without interruption within 8 hours while the network is completely linked up with all workstations and servers, then the cable infrastructure has passed the test. Checking the cable infrastructure with specialized devices is optional. |
| 14.4.5 | Following the successful complete installation for all hardware and software at the project site and preliminary testing an Installation Certificate will be signed. |

### 14.5 Operational Acceptance Tests

In the presence of the authorized representatives of the Purchaser, the Supplier shall perform the following tests:

| 14.5.1 | Tests on the System as a whole and its Sub-systems in accordance with the Testing Programs developed by the Supplier and accepted by the Purchaser. The testing programs will include the following types of testing: |
| 14.5.2 | Unit testing – to fully test individual logic of each unit to verify compliance to functional requirements outlined in Technical Requirements. Success criteria – each unit of equipment passed all functionality tests; |
| 14.5.3 | String testing – to verify that the programs are working independently and functioning correctly, to check that each interface works correctly in terms of data consistency, timing constraints, data validation, error trapping / handling etc. Success criteria – all tested
groups of subsystems passed all interface tests;

<table>
<thead>
<tr>
<th>Section VII Schedule of Requirements</th>
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<tbody>
<tr>
<td><strong>14.5.4 Integration testing</strong> – to verify that system as a whole and all its components are working correctly. Success criteria – system as a whole and all its subsystems are able to interact in accordance with the Functional and Technical Requirements;</td>
</tr>
<tr>
<td><strong>14.5.5 Stress testing</strong> – to verify that system components and system as a whole are able to handle required amounts of data, to serve required number of users within acceptable response times. It will be defined what are the limits in terms of data volume / number of users / system events beyond that system / subsystem / module will crash or become unable to perform its key functions. Success criteria – system as a whole is able to serve required amount of users / handle required volumes of data with acceptable timeliness of response. System is able to handle estimated peak numbers of users / volumes of data with acceptable decrease of response time. When system crash occurs no critical data is lost.</td>
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<tr>
<td><strong>Description of Service</strong></td>
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<td>---------------------------</td>
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<tr>
<td>Training course for forecasters on advanced workstation features, with emphasis on Data Editing, Warning tools and Tools for specialized services</td>
</tr>
<tr>
<td>Training course for System Administrators on routine operations and system maintenance</td>
</tr>
<tr>
<td>Training course for System Administrators on automated display and delivery of products on DHM Web sites and Mobile devices</td>
</tr>
<tr>
<td>Completion of all required system tests &amp; commissioning of individual workstations</td>
</tr>
<tr>
<td>Completion of all required system tests &amp; commissioning of individual workstations</td>
</tr>
<tr>
<td>Completion of all required system tests &amp; commissioning of individual workstations</td>
</tr>
<tr>
<td>Transfer of individual workstations to regional centres, completion of required tests and commissioning</td>
</tr>
<tr>
<td>Transfer of individual workstations to regional centres, completion of required tests and commissioning</td>
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<tr>
<td>Description of Service</td>
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<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Transfer of individual <strong>workstations</strong> to regional centres, completion of required</td>
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<td>tests and commissioning</td>
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<tr>
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<td>tests and commissioning</td>
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<tr>
<td>On-line technical support, related services and license fees after commissioning</td>
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<td>(Spec. Item 12.6).</td>
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</table>
PART 3 - CONTRACT
# SECTION VIII. GENERAL CONDITIONS OF CONTRACT

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1. **Definitions**  

1.1 The following words and expressions shall have the meanings hereby assigned to them:

a. “Bank” means the World Bank and refers to the International Bank for Reconstruction and Development (IBRD) or the International Development Association (IDA).

b. “Contract” means the Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.

c. “Contract Documents” means the documents listed in the Contract Agreement, including any amendments thereto.

d. “Contract Price” means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract.

e. “Day” means calendar day.

f. “Completion” means the fulfillment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.

g. “GCC” means the General Conditions of Contract.

h. “Goods” means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.

i. “Purchaser’s Country” is the country specified in the Special Conditions of Contract (SCC).

j. “Purchaser” means the entity purchasing the Goods and Related Services, as specified in the SCC.

k. “Related Services” means the services incidental to the supply of the goods, such as insurance, installation, training and initial maintenance and other such obligations of the Supplier under the Contract.

l. “SCC” means the Special Conditions of Contract.

m. “Subcontractor” means any person, private or government entity, or a combination of the above, to whom any part of the
Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier.

n. “Supplier” means the person, private or government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.

o. “The Project Site,” where applicable, means the place named in the SCC.

2. **Contract Documents**
   2.1 Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.

3. **Corrupt and Fraudulent Practices**
   3.1 The Bank requires compliance with its policy in regard to corrupt and fraudulent practices as set forth in Appendix to the GCC.

   3.2 The Purchaser requires the Supplier to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.

4. **Interpretation**
   4.1 If the context so requires it, singular means plural and vice versa.

   4.2 Incoterms
      a. Unless inconsistent with any provision of the Contract, the meaning of any trade term and the rights and obligations of parties there under shall be as prescribed by Incoterms.
      b. The terms EXW, CIP, FCA, CFR and other similar terms, when used, shall be governed by the rules prescribed in the current edition of Incoterms specified in the SCC and published by the International Chamber of Commerce in Paris, France.

4.3 **Entire Agreement**
   The Contract constitutes the entire agreement between the Purchaser and the Supplier and supersedes all communications, negotiations and agreements (whether written or oral) of the parties with respect thereto made prior to the date of Contract.
4.4 Amendment

No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.

4.5 Non waiver

a. Subject to GCC Sub-Clause 4.5(b) below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.

b. Any waiver of a party’s rights, powers, or remedies under the Contract must be in writing, dated, and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

4.6 Severability

If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

5. Language

5.1 The Contract as well as all correspondence and documents relating to the Contract exchanged by the Supplier and the Purchaser, shall be written in the language specified in the SCC. Supporting documents and printed literature that are part of the Contract may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified, in which case, for purposes of interpretation of the Contract, this translation shall govern.

5.2 The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation, for documents provided by the Supplier.

6. Joint Venture, Consortium or Association

6.1 If the Supplier is a joint venture, consortium, or association, all of the parties shall be jointly and severally liable to the Purchaser for the fulfillment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the Purchaser.
7. **Eligibility**

7.1 The Supplier and its Subcontractors shall have the nationality of an eligible country. A Supplier or Subcontractor shall be deemed to have the nationality of a country if it is a citizen or constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of that country.

7.2 All Goods and Related Services to be supplied under the Contract and financed by the Bank shall have their origin in Eligible Countries. For the purpose of this Clause, origin means the country where the goods have been grown, mined, cultivated, produced, manufactured, or processed; or through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.

8. **Notices**

8.1 Any notice given by one party to the other pursuant to the Contract shall be in writing to the address specified in the SCC. The term “in writing” means communicated in written form with proof of receipt.

8.2 A notice shall be effective when delivered or on the notice’s effective date, whichever is later.

9. **Governing Law**

9.1 The Contract shall be governed by and interpreted in accordance with the laws of the Purchaser’s Country, unless otherwise specified in the SCC.

9.2 Throughout the execution of the Contract, the Contractor shall comply with the import of goods and services prohibitions in the Purchaser’s country when

9.3  

(a) as a matter of law or official regulations, the Borrower’s country prohibits commercial relations with that country; or

(b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower’s Country prohibits any import of goods from that country or any payments to any country, person, or entity in that country.

10. **Settlement of Disputes**

10.1 The Purchaser and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

10.2 If, after twenty-eight (28) 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 its
intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract. Arbitration proceedings shall be conducted in accordance with the rules of procedure specified in the SCC.

10.3 Notwithstanding any reference to arbitration herein,

a. The parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and

b. The Purchaser shall pay the Supplier any monies due the Supplier.

11. Inspections and Audit by the Bank

11.1 The Supplier shall keep, and shall make all reasonable efforts to cause its Subcontractors to keep, accurate and systematic accounts and records in respect of the Goods in such form and details as will clearly identify relevant time changes and costs.

11.2 The Supplier shall permit, and shall cause its Subcontractors to permit, the Bank and/or persons appointed by the Bank to inspect the Supplier’s offices and all accounts and records relating to the performance of the Contract and the submission of the bid, and to have such accounts and records audited by auditors appointed by the Bank if requested by the Bank. The Supplier’s and its Subcontractors and consultants’ attention is drawn to Clause 3 [Fraud and Corruption], which provides, inter alia, that acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under this Sub-Clause 11.1 constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank’s prevailing sanctions procedures)

12. Scope of Supply

12.1 The Goods and Related Services to be supplied shall be as specified in the Schedule of Requirements.

13. Delivery and Documents

13.1 Subject to GCC Sub-Clause 33.1, the Delivery of the Goods and Completion of the Related Services shall be in accordance with the Delivery and Completion Schedule specified in the Schedule of Requirements. The details of shipping and other documents to be furnished by the Supplier are specified in the SCC.
14. **Supplier’s Responsibilities**

14.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with GCC Clause 12, and the Delivery and Completion Schedule, as per GCC Clause 13.

15 **Contract Price**

15.1 Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any price adjustments authorized in the SCC.

16. **Terms of Payment**

16.1 The Contract Price, including any Advance Payments, if applicable, shall be paid as specified in the SCC.

16.2 The Supplier’s request for payment shall be made to the Purchaser in writing, accompanied by invoices describing, as appropriate, the Goods delivered and Related Services performed, and by the documents submitted pursuant to GCC Clause 13 and upon fulfillment of all other obligations stipulated in the Contract.

16.3 Payments shall be made promptly by the Purchaser, but in no case later than sixty (60) days after submission of an invoice or request for payment by the Supplier, and after the Purchaser has accepted it.

16.4 The currencies in which payments shall be made to the Supplier under this Contract shall be those in which the bid price is expressed.

16.5 In the event that the Purchaser fails to pay the Supplier any payment by its due date or within the period set forth in the SCC, the Purchaser shall pay to the Supplier interest on the amount of such delayed payment at the rate shown in the SCC, for the period of delay until payment has been made in full, whether before or after judgment or arbitrage award.

17. **Taxes and Duties**

17.1 For goods manufactured outside the Purchaser’s Country, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the Purchaser’s Country.

17.2 For goods Manufactured within the Purchaser’s country, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.

17.3 If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in the Purchaser’s Country, the Purchaser shall use its best efforts to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.

18. **Performance Security**

18.1 If required as specified in the SCC, the Supplier shall, within twenty-eight (28) days of the notification of contract award, provide a
performance security for the performance of the Contract in the amount specified in the **SCC**.

18.2 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 its obligations under the Contract.

18.3 As specified in the SCC, the Performance Security, if required, shall be denominated in the currency(ies) of the Contract, or in a freely convertible currency acceptable to the Purchaser; and shall be in one of the format stipulated by the Purchaser in the **SCC**, or in another format acceptable to the Purchaser.

18.4 The Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than twenty-eight (28) days following the date of Completion of the Supplier’s performance obligations under the Contract, including any warranty obligations, unless specified otherwise in the **SCC**.

19. **Copyright**

19.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.

20. **Confidential Information**

20.1 The Purchaser and the Supplier shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract. Notwithstanding the above, the Supplier may furnish to its Subcontractor such documents, data, and other information it receives from the Purchaser to the extent required for the Subcontractor to perform its work under the Contract, in which event the Supplier shall obtain from such Subcontractor an undertaking of confidentiality similar to that imposed on the Supplier under GCC Clause 20.

20.2 The Purchaser shall not use such documents, data, and other information received from the Supplier for any purposes unrelated to the contract. Similarly, the Supplier shall not use such documents, data, and other information received from the Purchaser for any purpose other than the performance of the Contract.
20.3 The obligation of a party under GCC Sub-Clauses 20.1 and 20.2 above, however, shall not apply to information that:

a. The Purchaser or Supplier need to share with the Bank or other institutions participating in the financing of the Contract;

b. Now or hereafter enters the public domain through no fault of that party;

c. Can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party; or

d. Otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.

20.4 The above provisions of GCC Clause 20 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto in respect of the Supply or any part thereof.

20.5 The provisions of GCC Clause 20 shall survive completion or termination, for whatever reason, of the Contract.

21. **Subcontracting**

21.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Contract if not already specified in the bid. Such notification, in the original bid or later shall not relieve the Supplier from any of its obligations, duties, responsibilities, or liability under the Contract.

21.2 Subcontracts shall comply with the provisions of GCC Clauses 3 and 7.

22. **Specifications and Standards**

22.1 Technical Specifications and Drawings

a. The Goods and Related Services supplied under this Contract shall conform to the technical specifications and standards mentioned in Section VI, Schedule of Requirements and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the Goods’ country of origin.

b. The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Purchaser.

c. Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those
23. Packing and Documents

23.1 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. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, 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.

23.2 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 the SCC, and in any other instructions ordered by the Purchaser.

24. Insurance

24.1 Unless otherwise specified in the SCC, the Goods supplied under the Contract shall be fully insured—in a freely convertible currency from an eligible country—against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery, in accordance with the applicable Incoterms or in the manner specified in the SCC.

25. Transportation and Incidental Services

25.1 Unless otherwise specified in the SCC, responsibility for arranging transportation of the Goods shall be in accordance with the specified Incoterms.

25.2 The Supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:

(a) Performance or supervision of on-site assembly and/or start-up of the supplied Goods;

(b) Furnishing of tools required for assembly and/or maintenance of the supplied Goods;

(c) Furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;

(d) 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
(e) 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.

25.3 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.

26. **Inspections and Tests**

26.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are specified in the SCC.

26.2 The inspections and tests may be conducted on the premises of the Supplier or its Subcontractor, at point of delivery, and/or at the Goods’ final destination, or in another place in the Purchaser’s Country as specified in the SCC. Subject to GCC Sub-Clause 26.3, if conducted on the premises of the Supplier or its Subcontractor, all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Purchaser.

26.3 The Purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to in GCC Sub-Clause 26.2, provided that the Purchaser bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.

26.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.

26.5 The Purchaser may require the Supplier to carry out any test and/or inspection not required by the Contract but deemed necessary to verify that the characteristics and performance of the Goods comply with the technical specifications codes and standards under the Contract, provided that the Supplier’s reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of manufacturing and/or the Supplier’s performance of its other obligations under the Contract, due allowance will be made in respect of the Delivery Dates and Completion Dates and the other obligations so affected.
26.6 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.

26.7 The Purchaser may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Purchaser, and shall repeat the test and/or inspection, at no cost to the Purchaser, upon giving a notice pursuant to GCC Sub-Clause 26.4.

26.8 The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Purchaser or its representative, nor the issue of any report pursuant to GCC Sub-Clause 26.6, shall release the Supplier from any warranties or other obligations under the Contract.

27. Liquidated Damages

27.1 Except as provided under GCC Clause 32, if the Supplier fails to deliver any or all of the Goods by the Date(s) of delivery or perform the Related Services within the period specified in the Contract, the Purchaser may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in the SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in those SCC. Once the maximum is reached, the Purchaser may terminate the Contract pursuant to GCC Clause 35.

28. Warranty

28.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.

28.2 Subject to GCC Sub-Clause 22.1(b), the Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination.

28.3 Unless otherwise specified in the SCC, the warranty shall remain valid for twenty four (24) 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 SCC, or for eighteen (18) months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.
28.4 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.

28.5 Upon receipt of such notice, the Supplier shall, within the period specified in the SCC, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.

28.6 If having been notified, the Supplier fails to remedy the defect within the period specified in the SCC, the Purchaser may proceed to take within a reasonable period 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.

29. **Patent Indemnity**

29.1 The Supplier shall, subject to the Purchaser’s compliance with GCC Sub-Clause 29.2, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney’s fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:

a. The installation of the Goods by the Supplier or the use of the Goods in the country where the Site is located; and

b. The sale in any country of the products produced by the Goods.

Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, plant, or materials not supplied by the Supplier, pursuant to the Contract.

29.2 If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in GCC Sub-Clause 29.1, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser’s name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.
29.3 If the Supplier fails to notify the Purchaser within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf.

29.4 The Purchaser shall, at the Supplier’s request, afford all available assistance to the Supplier in conducting such proceedings or claim, and shall be reimbursed by the Supplier for all reasonable expenses incurred in so doing.

29.5 The Purchaser shall indemnify and hold harmless the Supplier and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney’s fees and expenses, which the Supplier may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Purchaser.

30. Limitation of Liability

30.1 Except in cases of criminal negligence or willful misconduct,

(a) 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 liquidated damages to the Purchaser and

(b) 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, or to any obligation of the supplier to indemnify the purchaser with respect to patent infringement.

31. Change in Laws and Regulations

31.1 Unless otherwise specified in the Contract, if after the date of 28 days prior to date of Bid submission, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in the place of the Purchaser’s country where the Site is located (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/or the Contract Price, then
such Delivery Date and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Supplier has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with GCC Clause 15.

32. **Force Majeure**

32.1 The Supplier shall not be liable for forfeiture of its Performance Security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

32.2 For purposes of this Clause, “Force Majeure” means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

32.3 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.

33. **Change Orders and Contract Amendments**

33.1 The Purchaser may at any time order the Supplier through notice in accordance GCC Clause 8, to make changes within the general scope of the Contract in any one or more of the following:

a. Drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;

b. The method of shipment or packing;

c. The place of delivery; and

d. The Related Services to be provided by the Supplier.

33.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier’s performance of any provisions under
the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery/Completion Schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this Clause must be asserted within twenty-eight (28) days from the date of the Supplier’s receipt of the Purchaser’s change order.

33.3 Prices to be charged by the Supplier for any Related Services that might be needed but which were not included in the Contract 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.

33.4 Subject to the above, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

34. **Extensions of Time**

34.1 If at any time during performance of the Contract, the Supplier or its subcontractors should encounter conditions impeding timely delivery of the Goods or completion of Related Services pursuant to GCC Clause 13, the Supplier shall promptly notify the Purchaser in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Supplier’s notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier’s time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.

34.2 Except in case of Force Majeure, as provided under GCC Clause 32, a delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 26, unless an extension of time is agreed upon, pursuant to GCC Sub-Clause 34.1.

35. **Termination**

35.1 Termination for Default

a. The Purchaser, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate the Contract in whole or in part:

i. If the Supplier fails to deliver any or all of the Goods within the period specified in the Contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause 34;

ii. If the Supplier fails to perform any other obligation under the Contract; or

iii. If the Supplier, in the judgment of the Purchaser has engaged in fraud and corruption, as defined in GCC Clause 3, in competing for or in executing the Contract.
b. In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 35.1(a), the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those undelivered or not performed, and the Supplier shall be liable to the Purchaser for any additional costs for such similar Goods or Related Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

35.2 Termination for Insolvency.

a. The Purchaser may at any time terminate the Contract by giving notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Purchaser.

35.3 Termination for Convenience.

a. The Purchaser, by notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser’s convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.

b. The Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier’s receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:

i. To have any portion completed and delivered at the Contract terms and prices; and/or

ii. To cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Supplier.

36. Assignment

36.1 Neither the Purchaser nor the Supplier shall assign, in whole or in part, their obligations under this Contract, except with prior written consent of the other party.
37. Export Restriction

37.1 Notwithstanding any obligation under the Contract to complete all export formalities, any export restrictions attributable to the Purchaser, to the country of the Purchaser, or to the use of the products/goods, systems or services to be supplied, which arise from trade regulations from a country supplying those products/goods, systems or services, and which substantially impede the Supplier from meeting its obligations under the Contract, shall release the Supplier from the obligation to provide deliveries or services, always provided, however, that the Supplier can demonstrate to the satisfaction of the Purchaser and of the Bank that it has completed all formalities in a timely manner, including applying for permits, authorizations and licenses necessary for the export of the products/goods, systems or services under the terms of the Contract. Termination of the Contract on this basis shall be for the Purchaser’s convenience pursuant to Sub-Clause 35.3.
APPENDIX TO GENERAL CONDITIONS

Bank’s Policy- Corrupt and Fraudulent Practices

(text in this Appendix shall not be modified)

Guidelines for Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers, dated January 2011:

“Fraud and Corruption:

1.16 It is the Bank’s policy to require that Borrowers (including beneficiaries of Bank loans), bidders, suppliers, contractors and their agents (whether declared or not), sub-contractors, sub-consultants, service providers or suppliers, and any personnel thereof, observe the highest standard of ethics during the procurement and execution of Bank-financed contracts. In pursuance of this policy, the Bank:

(a) Defines, for the purposes of this provision, the terms set forth below as follows:

(i) “Corrupt practice” is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party; 17;

(ii) “Fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation; 18

(iii) “Collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party; 19

16 In this context, any action to influence the procurement process or contract execution for undue advantage is improper.

17 For the purpose of this sub-paragraph, “another party” refers to a public official acting in relation to the procurement process or contract execution. In this context, “public official” includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

18 For the purpose of this sub-paragraph, “party” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution.

19 For the purpose of this sub-paragraph, “parties” refers to participants in the procurement process (including
(iv) “Coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party; 20

(v) "Obstructive practice" is:

(aa) Deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or

(bb) Acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under paragraph 1.16(e) below.

(b) will reject a proposal for award if it determines that the bidder recommended for award, or any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;

(c) will declare misprocurement and cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement or the implementation of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;

(d) will sanction a firm or individual, at any time, in accordance with the prevailing Bank’s sanctions procedures, 21 including by publicly declaring such firm or individual ineligible, for public officials) attempting either themselves, or through another person or entity not participating in the procurement or selection process, to simulate competition or to establish bid prices at artificial, non-competitive levels, or are privy to each other’s bid prices or other conditions.

20 For the purpose of this sub-paragraph, “party” refers to a participant in the procurement process or contract execution.

21 A firm or individual may be declared ineligible to be awarded a Bank financed contract upon: (i) completion of the Bank’s sanctions proceedings as per its sanctions procedures, including, inter alia, cross-debarment as agreed with other International Financial Institutions, including Multilateral Development Banks, and through the application the World Bank Group corporate administrative procurement sanctions procedures for fraud and
either indefinitely or for a stated period of time: (i) to be awarded a Bank-financed contract; and (ii) to be a nominated\(^22\).

(e) will require that a clause be included in bidding documents and in contracts financed by a Bank loan, requiring bidders, suppliers and contractors, and their sub-contractors, agents, personnel, consultants, service providers, or suppliers, to permit the Bank to inspect all accounts, records, and other documents relating to the submission of bids and contract performance, and to have them audited by auditors appointed by the Bank.”

corruption; and (ii) as a result of temporary suspension or early temporary suspension in connection with an ongoing sanctions proceeding. See footnote 14 and paragraph 8 of Appendix 1 of these Guidelines.

\(^22\) A nominated sub-contractor, consultant, manufacturer or supplier, or service provider (different names are used depending on the particular bidding document) is one which has either been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.
SECTION IX. SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions of Contract (SCC) shall supplement and/or amend the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

<table>
<thead>
<tr>
<th>GCC 1.1(f) Definitions</th>
<th>“Completion” means that the Facilities (or a specific part thereof where specific parts are specified in the Contract) have been completed operationally and structurally and put in a tight and clean condition, and that the Facilities or specific part thereof are ready for Commissioning.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GCC 1.1(i) Definitions</td>
<td>The Purchaser’s country is: Nepal</td>
</tr>
<tr>
<td>GCC 1.1(j) Definitions</td>
<td>The Purchaser is: Department of Hydrology and Meteorology Building Resilience to Climate Related Hazards Project, Nagpokhari, Naxal, Kathmandu</td>
</tr>
<tr>
<td>GCC 1.1 (o) Definitions</td>
<td>The Project Site(s)/Final Destination(s) is/are as specified in Table 1 in Technical Specifications</td>
</tr>
<tr>
<td>GCC 1.1 (p) Definitions</td>
<td>Acceptance Certificate: It is a certificate issued by the authorized personal of the Purchaser upon satisfactory installation and commissioning of the goods (equipment) all complete.</td>
</tr>
<tr>
<td>GCC 1.1 (q) Definitions</td>
<td>Bid/Bidder/Bidding is synonymous to Tender/Tenderer/Tendering respectively.</td>
</tr>
<tr>
<td>GCC 1.1 (r) Definitions</td>
<td>Unless otherwise specific to the sentence, ‘Employer’ also denotes the ‘Purchaser’</td>
</tr>
<tr>
<td>GCC 1.1 (s) Definitions</td>
<td>Unless otherwise specific to the sentence, ‘Engineer’ also denotes the ‘Consultant’</td>
</tr>
<tr>
<td>GCC 1.1 (t) Definitions</td>
<td>Unless otherwise specific to the sentence, ‘Contractor’ also denotes the ‘Supplier’</td>
</tr>
<tr>
<td>GCC 1.1 (u) Definitions</td>
<td>“Commissioning” means operation of the Workstations and automated production system or any part thereof by the Contractor following Completion, which operation is to be carried out by the Contractor as provided in the contract.</td>
</tr>
</tbody>
</table>
### GCC 1.1 (v) Definitions
“Operational Acceptance” means the acceptance by the Employer of Workstations and automated production system (or any part of it) which certifies the Contractor’s fulfillment of the Contract.

### GCC 4.2 (a) Interpretations
The meaning of the trade terms shall be as prescribed by Incoterms. If the meaning of any trade term and the rights and obligations of the parties thereunder shall not be as prescribed by Incoterms, they shall be as prescribed by: **Other internationally accepted trade terms**

### GCC 4.2 (b)
The version edition of Incoterms shall be: **Incoterms 2000**

### GCC 5.1 Language
The language shall be: **English**

### GCC 8.1 Notice
For notices, the Purchaser’s address shall be:

- **Attention:** Mr. Saraju Kumar Baidya, Assistant Project Director, BRCH Project
- **Street Address:** Department of Hydrology and Meteorology
- **Building Resilience to Climate Related Hazards Project, Project Management Unit, Nagpokhari, Naxal**
- **Floor/ Room number:** First Floor
- **City:** Kathmandu
- **ZIP Code:** Not applicable
- **Country:** Nepal
- **Telephone:** +977-1-4433563/44333472
- **Facsimile number:** +977-1-4433472/4436272
- **Electronic mail address:** ppcr.brch@dhm.gov.np

### GCC 9.1 Governing Law
The governing law shall be the law of: **Nepal**

### GCC 10.2 Settlement of Disputes
The rules of procedure for arbitration proceedings pursuant to GCC Clause 10.2 shall be as follows:

> [“Clause 10.2 (a) shall be retained in the case of a Contract with a foreign Supplier and clause 10.2 (b) shall be retained in the case of a Contract with a national of the Purchaser’s country.”]

- **Contract with foreign Supplier:**

  GCC 10.2 (a)—Any dispute arising out of or in connection with this Contract, including any question regarding its existence, validity or termination shall be referred to and finally resolved by arbitration under
### Section IX Special Conditions of Contract

<table>
<thead>
<tr>
<th>GCC 13.1 Delivery and Documents</th>
<th>Details of Shipping and other Documents to be furnished by the Supplier are:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>i. A negotiable bill of lading</td>
</tr>
<tr>
<td></td>
<td>ii. A non-negotiable sea way bill,</td>
</tr>
<tr>
<td></td>
<td>iii. An airway bill,</td>
</tr>
<tr>
<td></td>
<td>iv. A railway consignment note,</td>
</tr>
<tr>
<td></td>
<td>v. A road consignment note,</td>
</tr>
<tr>
<td></td>
<td>vi. Insurance certificate,</td>
</tr>
<tr>
<td></td>
<td>vii. Manufacturer’s or Supplier’s warranty certificate,</td>
</tr>
<tr>
<td></td>
<td>viii. Supplier’s factory shipping details etc.</td>
</tr>
</tbody>
</table>

The above documents shall be received by the Purchaser before arrival of the Goods and, if not received, the Supplier will be responsible for any consequent expenses.

<table>
<thead>
<tr>
<th>Sub Clause GCC 14.1 Supplier’s Responsibility</th>
<th>The Servers, Workstations and Automated production system shall be installed and commissioned within 13 months after signing of contract as per Para. 2.1 (Section VII Schedule of requirements) and Table 1. Implementation Schedule in Technical Specification</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>GCC 15.1 Contract Price</th>
<th>The prices charged for the Goods supplied and the related Services performed “shall not,” be adjustable.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>GCC 16.1 and 16.2 Terms of Payments</th>
<th>Replace GCC 16.1 and 16.2 by the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Payment for Goods supplied from abroad:</strong></td>
<td>Payment of foreign currency portion shall be made in [currency of the Contract Price] in the following manner:</td>
</tr>
<tr>
<td>(i) Advance Payment: Ten (10) percent of the total CIP amount as an advance payment shall be paid within thirty (30) days of signing of the Contract, and upon submission of claim and a bank guarantee for equivalent amount valid until the Goods are delivered, installed, and</td>
<td></td>
</tr>
</tbody>
</table>
commissioned, and in the form provided in the bidding documents or another form acceptable to the Purchaser.

(ii) On Shipment: Seventy (70) percent of the CIP amount of the Goods shipped shall be paid through irrevocable confirmed letter of credit opened in favor of the Supplier in a bank in its country, upon submission of documents specified in GCC Clause 13.

(iii) On Completion and Commissioning: Ten (10) percent of the CIP amount of Goods Work stations and automated production system and any part thereof, installed and commissioned shall be paid, within thirty (30) days of claim supported by the acceptance certificate issued by the Purchaser.

(iv) On Operational Acceptance: Ten (10) percent of the CIP amount of Goods upon issue of Operational Acceptance Certificate, within thirty (30) days after receipt of invoice.

Payment of local currency portion shall be made in Nepali Rupee (NPR) currencies within thirty (30) days of presentation of claim supported by a certificate from the Purchaser declaring that the Goods have been delivered and that all other contracted Services have been performed.

Payment for Goods supplied from within the Purchaser’s country:

Payment for Goods and Services supplied from within the Purchaser’s country shall be made in Nepali Rupee (NPR), as follows:

(i) Advance Payment: Ten (10) percent of the Contract Price shall be paid within thirty (30) days of signing of the Contract against a simple receipt and a bank guarantee for the equivalent amount and in the form provided in the bidding documents or another form acceptable to the Purchaser.

(ii) On Delivery: Seventy (70) percent of the Contract Price shall be paid on receipt of the Goods and upon submission of the documents specified in GCC Clause 13.

(iii) On Acceptance: The remaining Twenty (20) percent of the Contract Price shall be paid to the Supplier within thirty (30) days after the date of the acceptance certificate for the respective delivery issued by the Purchaser.

Payment for Related Services:

In respect of installation other related services for both the foreign and local currency portions, the following payments shall be made:

Ten percent (10%) of the total related services amount as an advance payment against receipt of invoice, and an irrevocable advance payment security for the
equivalent amount made out in favor of the Employer/ Purchaser. The advance payment security may be reduced in proportion to the value of work performed by the Contractor/ Supplier as evidenced by the invoices for installation and related services.

Eighty percent (80%) of the measured value of work performed by the Contractor/ Supplier, as identified in the said Program of Performance, during the preceding month, as evidenced by the Employer’s authorization of the Contractor’s application, will be made monthly within forty-five (45) days after receipt of invoice.

Five percent (5%) of the total or pro rata value of installation and related services performed by the Contractor/Supplier as evidenced by the Employer’s/Purchaser’s authorization of the Contractor’s/Supplier’s monthly applications, upon issue of the Completion Certificate, within forty-five (45) days after receipt of invoice.

Five percent (5%) of the total or pro rata value of installation and related services performed by the Contractor/Supplier as evidenced by the Employer’s/Purchaser’s authorization of the Contractor’s/Supplier’s monthly applications, upon issue of the Operational Acceptance Certificate, within forty-five (45) days after receipt of invoice.

Regarding Payment of Technical Service excluding those services which are included in the Warranty, after successful operative Test (OT), the Contractor or Supplier will submit a Performance bank guarantee acceptable to Employer and of amount and in currency quoted in bid against which advance payment will be made. The Bank guarantee will be released in annual installments in pro-rata time basis upon satisfactory completion of the Technical Service to be provided. Otherwise, Employer shall undertake necessary measures to compensate for unfulfilled service from the remaining Performance amount.

| GCC 16.5 Terms of Payment | The payment-delay period after which the Purchaser shall pay interest to the supplier shall be 30 days.  
The interest rate that shall be applied is: 4% for Foreign Currency and 8% for local currency. |
|---------------------------|-------------------------------------------------------------------------------------------------------------------|
| GCC 18.1 Performance Security | A Performance Security “shall” be required.  
The amount of the Performance Security shall be: Ten (10) percent of Contract Price including VAT |
| GCC 18.3 | Performance Security shall be in the form of: “Performance Security Option 1: (Bank Guarantee) in attached format” |
### GCC 23.2 Packing and Documents
Add following after Sub Clause 23.2

The packing, marking and documentation within and outside the packages shall be:

A complete packing list indicating the content of each package shall be enclosed in a waterproof envelope and shall be secured to the outside of the packing case. In addition, each package shall be marked with indelible ink/paint in bold letters, as follows:

a. **Contract number**

b. **Name and address of the Purchaser**

c. **Country of origin**

d. **Gross weight**

e. **Net weight**

f. **Package number of total number of packages**

g. **Brief description of content**

Upright markings, where appropriate, shall be placed on all four vertical sides of the package.

All materials used for packing shall be environmentally neutral.

### GCC 24.1 Insurance
The insurance coverage shall be as specified in the Incoterms.

### GCC 25.1 Transportation and Incidental Services
The Supplier is required under the Contract to transport the Goods to a specified place of final destination within the Purchaser’s country, as specified in Table 1 in Technical specifications, including insurance and storage, as shall be specified in the Contract, shall be arranged by the Supplier, and related costs shall be included in the Contract Price.

### GCC 25.2 Transportation and Incidental Services
Additional incidental services mentioned below for facilitation shall form a part of ‘Related Services and completion Schedule-item 5’

### GCC 26.1 Inspection and Test
The inspections and tests shall be: in accordance with provisions stipulated in “5. Inspections and Tests of Section VII- Schedule of Requirements”

### GCC 26.2 Inspection and Test
Add the following in Sub Clause 26.2
The inspections and tests shall be conducted during delivery at
<table>
<thead>
<tr>
<th>Test</th>
<th>Department of Hydrology and Meteorology, Nagpokhari, Kathmandu or places deemed appropriate for inspections and tests by purchaser. Other tests shall be conducted at various stages as detailed in the Technical Specification in accordance with provisions stipulated in “5. Inspections and Tests of Section VII- Schedule of Requirements”</th>
</tr>
</thead>
<tbody>
<tr>
<td>GCC 27.1 Liquidated Damages</td>
<td>The liquidated damage shall be: Interim liquidated damage of 0.35 % of total Contract price (including VAT) per week will be applied for delay of activities denoted in Table 3a exceeding stipulated of 16 months after signing of contract</td>
</tr>
<tr>
<td>GCC 28.3 Warranty</td>
<td>The period of validity of the Warranty shall be: The warranty period shall be two (2) years starting after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at agreed DHM facility in Kathmandu. For purposes of the Warranty, the place(s) of final destination(s) shall be: The Project Sites listed as in Table 1 in Technical Specifications or any change agreed thereto during execution.</td>
</tr>
<tr>
<td>GCC 28.5 Warranty</td>
<td>The period for repair or replacement shall be: The maximum period of time that the system remains inoperative (excluding causes that are external to the system), should not exceed 1 day per year.</td>
</tr>
</tbody>
</table>
Attachment: Price Adjustment Formula (Not applicable)

If in accordance with GCC 15.1, prices shall be adjustable, the following method shall be used to calculate the price adjustment:

15.1 Prices payable to the Supplier, as stated in the Contract, shall be subject to adjustment during performance of the Contract to reflect changes in the cost of labor and material components in accordance with the formula:

\[
P_1 = P_0 \left[ a + bL_1 + cM_1 \right] - P_0
\]

\[
L_0 \cdot M_0
\]

\[a+b+c = 1\]

in which:

- \(P_1\) = adjustment amount payable to the Supplier.
- \(P_0\) = Contract Price (base price).
- \(a\) = fixed element representing profits and overheads included in the Contract Price and generally in the range of five (5) to fifteen (15) percent.
- \(b\) = estimated percentage of labor component in the Contract Price.
- \(c\) = estimated percentage of material component in the Contract Price.
- \(L_0, L_1\) = *labor indices applicable to the appropriate industry in the country of origin on the base date and date for adjustment, respectively.
- \(M_0, M_1\) = *material indices for the major raw material on the base date and date for adjustment, respectively, in the country of origin.

The Bidder shall indicate the source of the indices and the base date indices in its bid.

The coefficients \(a\), \(b\), and \(c\) as specified by the Purchaser are as follows:

\[a = \text{[insert value of coefficient]}\]

\[b = \text{[insert value of coefficient]}\]

\[c = \text{[insert value of coefficient]}\]

Base date = thirty (30) days prior to the deadline for submission of the bids.
Section IX Special Conditions of Contract

Date of adjustment = \( \text{[insert number of weeks]} \) weeks prior to date of shipment (representing the mid-point of the period of manufacture).

The above price adjustment formula shall be invoked by either party subject to the following further conditions:

(a) No price adjustment shall be allowed beyond the original delivery dates. As a rule, no price adjustment shall be allowed for periods of delay for which the Supplier is entirely responsible. The Purchaser will, however, be entitled to any decrease in the prices of the Goods and Services subject to adjustment.

(b) If the currency in which the Contract Price \( P_0 \) is expressed is different from the currency of origin of the labor and material indices, a correction factor will be applied to avoid incorrect adjustments of the Contract Price. The correction factor shall correspond to the ratio of exchange rates between the two currencies on the base date and the date for adjustment as defined above.

(c) No price adjustment shall be payable on the portion of the Contract Price paid to the Supplier as advance payment.
SECTION X. CONTRACT FORMS

This Section contains forms which, once completed, will form part of the Contract. The forms for Performance Security and Advance Payment Security, when required, shall only be completed by the successful Bidder after contract award.

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Option 2: Performance Bond (Not applicable) .......................................................................... 159
Advance Payment Security .......................................................................................................... 161
SAMPLE FORMAT ...................................................................................................................... Error! Bookmark not defined.
Letter of Acceptance

[Letterhead paper of the Purchaser]

[DATE]

To: [Name and address of the Supplier]

Subject: Notification of Award Contract No. ...........

This is to notify you that your Bid dated .... [insert date] .... for execution of the ........ .[insert name of the contract and identification number, as given in the SCC] ........ for the Accepted Contract Amount of ........ .[insert amount in numbers and words and name of currency], as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by our Agency.

You are requested to furnish the Performance Security within 28 days in accordance with the Conditions of Contract, using for that purpose the of the Performance Security Form included in Section X, Contract Forms, of the Bidding Document.

Authorized Signature: __________________________________________

Name and Title of Signatory: __________________________________________

Name of Agency: __________________________________________

Attachment: Contract Agreement
Contract Agreement

[The successful Bidder shall fill in this form in accordance with the instructions indicated]

THIS AGREEMENT made

the [ insert: number ] day of [ insert: month ], [ insert: year ].

BETWEEN

(1) [insert complete name of Purchaser ], a [ insert description of type of legal entity, for example, an agency of the Ministry of .... of the Government of { insert name of Country of Purchaser }, or corporation incorporated under the laws of { insert name of Country of Purchaser }] and having its principal place of business at [ insert address of Purchaser ] (hereinafter called “the Purchaser”), of the one part, and

(2) [insert name of Supplier], a corporation incorporated under the laws of [ insert: country of Supplier] and having its principal place of business at [ insert: address of Supplier ] (hereinafter called “the Supplier”), of the other part :

WHEREAS the Purchaser invited bids for certain Goods and ancillary services, viz., [insert brief description of Goods and Services] and has accepted a Bid by the Supplier for the supply of those Goods and Services.

The Purchaser and the Supplier agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.

2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other contract documents.
   a. The Letter of Acceptance
   b. The Letter of Bid
   c. The Addenda Nos._____ (if any)
   d. Special Conditions of Contract
   e. General Conditions of Contract
   f. The Specification (including Schedule of Requirements and Technical Specifications)
   g. The completed Schedules (including Price Schedules)
   h. Any other document listed in GCC as forming part of the Contract

3. In consideration of the payments to be made by the Purchaser to the Supplier as specified in
this Agreement, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of [insert the name of the Contract governing law country] on the day, month and year indicated above.

For and on behalf of the Purchaser

Signed: [insert signature]
in the capacity of [ insert title or other appropriate designation ]
in the presence of [insert identification of official witness]

For and on behalf of the Supplier

Signed: [insert signature of authorized representative(s) of the Supplier]
in the capacity of [ insert title or other appropriate designation ]
in the presence of [ insert identification of official witness]
Performance Security

Option 1: (Bank Guarantee)

[The bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]

[Guarantor letterhead or SWIFT identifier code]

**Beneficiary:** [insert name and Address of Purchaser]

**Date:** [Insert date of issue]

**PERFORMANCE GUARANTEE No.:** [Insert guarantee reference number]

**Guarantor:** [Insert name and address of place of issue, unless indicated in the letterhead]

We have been informed that [insert name of Supplier, which in the case of a joint venture shall be the name of the joint venture] (hereinafter called "the Applicant") has entered into Contract No. [insert reference number of the contract] dated [insert date] with the Beneficiary, for the supply of [insert name of contract and brief description of Goods and related Services] (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of [insert amount in figures] (1)[insert amount in words],1 such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary’s complying demand supported by the Beneficiary’s statement, whether in the demand itself or in a separate signed

1 The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, and denominated either in the currency(ies) of the Contract or a freely convertible currency acceptable to the Beneficiary.
document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the .... Day of ...., 2... 2, and any demand for payment under it must be received by us at this office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

_____________________
[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

2 Insert the date twenty-eight days after the expected completion date as described in GC Clause 18.4. The Purchaser should note that in the event of an extension of this date for completion of the Contract, the Purchaser would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Purchaser might consider adding the following text to the form, at the end of the penultimate paragraph: “The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Beneficiary’s written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.”
Option 2: Performance Bond (Not applicable)

By this Bond as Principal (hereinafter called “the Supplier”) and as Surety (hereinafter called “the Surety”), are held and firmly bound unto as Obligee (hereinafter called “the Supplier”) in the amount of [insert amount in words and figures], for the payment of which sum well and truly to be made in the types and proportions of currencies in which the Contract Price is payable, the Supplier and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Contractor has entered into a written Agreement with the Purchaser dated the day of , 20, for [name of contract and brief description of Goods and related Services] in accordance with the documents, plans, specifications, and amendments thereto, which to the extent herein provided for, are by reference made part hereof and are hereinafter referred to as the Contract.

NOW, THEREFORE, the Condition of this Obligation is such that, if the Supplier shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise, it shall remain in full force and effect. Whenever the Supplier shall be, and declared by the Purchaser to be, in default under the Contract, the Purchaser having performed the Purchaser's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

(1) Complete the Contract in accordance with its terms and conditions; or

(2) Obtain a Bid or bids from qualified Bidders for submission to the Purchaser for completing the Contract in accordance with its terms and conditions, and upon determination by the Purchaser and the Surety of the lowest responsive Bidder, arrange for a Contract between such Bidder and Purchaser and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the Balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term “Balance of the Contract Price,” as used in this paragraph, shall mean the total amount payable by Purchaser to Supplier under the Contract, less the amount properly paid by Purchaser to Contractor; or

(3) Pay the Purchaser the amount required by Purchaser to complete the Contract in accordance with its terms and conditions up to a total not exceeding the amount of this Bond.
The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

Any suit under this Bond must be instituted before the expiration of one year from the date of the issuing of the Taking-Over Certificate.

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Purchaser named herein or the heirs, executors, administrators, successors, and assigns of the Purchaser.

In testimony whereof, the Supplier has hereunto set his hand and affixed his seal, and the Surety has caused these presents to be sealed with his corporate seal duly attested by the signature of his legal representative, this ____ day of _____ 20 ______.

SIGNED ON __on behalf of __

By ______________________________ in the capacity of ______________________________

In the presence of __________________________

SIGNED ON __on behalf of ______________________________

By ______________________________ in the capacity of ______________________________

In the presence of __________________________

____________________________
Advance Payment Security

[Guarantor letterhead or SWIFT identifier code]

**Beneficiary:** [Insert name and Address of Purchaser]

**Date:** [Insert date of issue]

**ADVANCE PAYMENT GUARANTEE No.:** [Insert guarantee reference number]

**Guarantor:** [Insert name and address of place of issue, unless indicated in the letterhead]

We have been informed that [insert name of Supplier, which in the case of a joint venture shall be the name of the joint venture] (hereinafter called “the Applicant”) has entered into Contract No. [insert reference number of the contract] dated [insert date] with the Beneficiary, for the execution of [insert name of contract and brief description of Goods and related Services] (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum [insert amount in figures] () [insert amount in words] is to be made against an advance payment guarantee.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of [insert amount in figures] () [insert amount in words] upon receipt by us of the Beneficiary’s complying demand supported by the Beneficiary’s statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Applicant:

a. Has used the advance payment for purposes other than toward delivery of Goods; or

b. Has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Applicant has failed to repay.

A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary’s bank stating that the advance payment referred to above has

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1 The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Purchaser.
been credited to the Applicant on its account number [insert number] at [insert name and address of Applicant’s bank].

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Applicant as specified in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety (90) percent of the Accepted Contract Amount, has been certified for payment, or on the [insert day] day of [insert month], 2 [insert year], whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No.758, except that the supporting statement under Article 15(a) is hereby excluded.

_____________________________________

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.
Invitation for Bids

Date of First Publication: September 27, 2017

COUNTRY: NEPAL

NAME OF PROJECT: BUILDING RESILIENCE TO CLIMATE RELATED HAZARDS (BRCH)

SCF Loan No.TF 13557/ SCF Grant No.: TF 013665

Contract Title: Meteorological workstation and automated production system (Supply, Installation and Commissioning)

Reference No.: PPCR/DHM/G/ICB-45

1. The Government of Nepal has received financing from the World Bank toward the cost of the Building Resilience to Climate Related Hazards Project (BRCH Project) and intends to apply part of the proceeds toward payments under the contract for Meteorological workstation and automated production system.

2. The Department of Hydrology and Meteorology now invites sealed bids from eligible bidders for tuning its readymade software, install, test and commission a hydro-meteorological workstation and production system for use by DHM meteorologists and hydrologists with the content and functional feature described in detail in specification.

3. Bidding will be conducted through the International Competitive Bidding procedures as specified in the World Bank’s Guidelines: Procurement of Goods, Works and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers, January 2011, and is open to all eligible bidders as defined in the Procurement Guidelines. In addition, please refer to paragraphs 1.6 and 1.7 setting forth the World Bank’s policy on conflict of interest.

4. Interested eligible bidders may obtain further information from the address mentioned under clause (11) below and inspect the bidding documents during office Hours 10:00 to 17:00 Hours at the address given below. A complete set of bidding documents in English may be purchased by interested eligible bidders upon the submission of a written application to the address below and upon payment of a nonrefundable fee of NPR Ten thousand (NPR 10,000) or equivalent. The method of payment will be direct deposit or Bankers cheque payable to Department of Hydrology and Meteorology, Kathmandu, Nepal to specified account number (Office Code No. 27-331-04, A/C No. ka-1-1-001) or bank transfer to the Gov. Revenue A/c Title No.14227 on Rastriya Banijya Bank, Thamel, Kathmandu, Nepal. The document may be sent by airmail for overseas delivery and surface mail or courier for local delivery provided if additional separate payment of NPR 12,000 or equivalent is deposited at (Office Code No. 27-331-04, A/C No. ka-1-1-001) account number* and information to the effect is received in time. The Department of Hydrology and Meteorology shall not be held responsible/accountable for any event of delay or non-delivery of document, whatsoever the cause there of

6. Bids must be delivered to the address below on or before 12:00 Hrs on 13-11-2017. Electronic bidding will not be permitted. Late bids will be rejected. Bids will be publicly
opened in the presence of the bidders’ designated representatives and anyone who choose to attend at the address below on 13:00 Hrs on 13-11-2017. Bid must be valid for a period of 120 days counting from the day of bid opening.

7. If the last date of purchasing, submission and opening falls on a government holiday then the next working day shall be considered the last day. In such a case the bid validity and bid security validity shall be recognized with effect from the original bid submission deadline.

8. All bids must be accompanied by a Bid Security of NPR 3,600,000 (Three Million Six Hundred Thousand) or equivalent freely convertible foreign currency. This shall be valid for minimum 30 days beyond the bid validity period.

9. The Bid, as well as all correspondence and documents relating to the bid submitted by the Bidder shall be written in the English language.

A Pre-bid meeting shall be held at Purchaser’ address below on date 25 – 10 – 2017 in order to clarify any issues or information related to bid.

10. The Employer reserves the right to accept or reject, wholly or partly any or all the bids without assigning reason, whatsoever.

11. The address(es) referred to above is(are):

Department of Hydrology and Meteorology
Building Resilience to Climate Related Hazards Project
Attn: Mr. Rajendra Sharma, chief, Procurement Unit,
BRCH Project, Nagpokhari, Naxal
Kathmandu, Nepal
Tel: +977-1-4433563/4436272
E-mail: ppcr.brch@dhm.gov.np
Website: www.dhm.gov.np,