

REQUEST FOR PROPOSAL (RFP)

From firms/institutes/organizations

Dear Sir / Madam:

We kindly request you to submit your Proposal for **Technical Support in Development of Climate** Scenarios in Viet Nam – Preparation of National Projections (Package 2 – CCAM & RegCM Models).

Please be guided by the form attached hereto as Annex 2, in preparing your Proposal.

Proposals may be submitted on or before Wednesday, September 17, 2014 (Hanoi time) and via email, courier mail or fax to the address below:

United Nations Development Programme Viet Nam
72 Ly Thuong Kiet Street, Hanoi, Viet Nam
Procurement Unit

Email: nguyen.thi.hoang.yen@undp.org

With envelop/email subject: (Name of company) RFP for Package 2 - CCAM & RegCM Models

(Maximum size per email: 7 MB. Bidders can split proposal into several emails if the file size is large)

Technical and Financial Proposals are to be submitted in <u>separate</u> envelop/email.

Your Proposal must be expressed in the English language, and valid for a minimum period of 120 days from the date of bid submission.

In the course of preparing your Proposal, it shall remain your responsibility to ensure that it reaches the address above on or before the deadline. Proposals that are received by UNDP after the deadline indicated above, for whatever reason, shall not be considered for evaluation. If you are submitting your Proposal by email, kindly ensure that they are signed and in the .pdf format, and free from any virus or corrupted files.

Services proposed shall be reviewed and evaluated based on completeness and compliance of the Proposal and responsiveness with the requirements of the RFP and all other annexes providing details of UNDP requirements.

The Proposal that complies with all of the requirements, meets all the evaluation criteria and offers the best value for money shall be selected and awarded the contract. Any offer that does not meet the requirements shall be rejected.

Any discrepancy between the unit price and the total price shall be re-computed by UNDP, and the unit price shall prevail and the total price shall be corrected. If the Service Provider does not accept the final price based on UNDP's re-computation and correction of errors, its Proposal will be rejected.

No price variation due to escalation, inflation, fluctuation in exchange rates, or any other market factors shall be accepted by UNDP after it has received the Proposal. At the time of Award of Contract or Purchase Order, UNDP reserves the right to vary (increase or decrease) the quantity of services and/or goods, by up to a maximum twenty five per cent (25%) of the total offer, without any change in the unit price or other terms and conditions.

Any Contract or Purchase Order that will be issued as a result of this RFP shall be subject to the General Terms and Conditions attached hereto. The mere act of submission of a Proposal implies that the Service Provider accepts without question the General Terms and Conditions of UNDP, herein attached as Annex 3.

Please be advised that UNDP is not bound to accept any Proposal, nor award a contract or Purchase Order, nor be responsible for any costs associated with a Service Providers preparation and submission of a Proposal, regardless of the outcome or the manner of conducting the selection process.

UNDP's vendor protest procedure is intended to afford an opportunity to appeal for persons or firms not awarded a Purchase Order or Contract in a competitive procurement process. In the event that you believe you have not been fairly treated, you can find detailed information about vendor protest procedures in the following link: http://www.undp.org/procurement/protest.shtml.

UNDP encourages every prospective Service Provider to prevent and avoid conflicts of interest, by disclosing to UNDP if you, or any of your affiliates or personnel, were involved in the preparation of the requirements, design, cost estimates, and other information used in this RFP.

UNDP implements a zero tolerance on fraud and other proscribed practices, and is committed to preventing, identifying and addressing all such acts and practices against UNDP, as well as third parties involved in UNDP activities. UNDP expects its Service Providers to adhere to the UN Supplier Code of Conduct found in this link: http://www.un.org/depts/ptd/pdf/conduct_english.pdf

Thank you and we look forward to receiving your Proposal.

Sincerely yours,

Tran Thi Hong Head, Procurement Unit 8/27/2014

Description of Requirements

| Context of the | Please see information in the TOR |
|-------------------------------|--|
| Requirement | |
| Implementing Partner of | Please see information in the TOR |
| UNDP | |
| Brief Description of the | Technical Support in Development of Climate Scenarios in Viet Nam – |
| Required Services | Preparation of National Projections (Package 2 – CCAM & RegCM Models) |
| List and Description of | |
| Expected Outputs to be | Please see information in the TOR |
| Delivered | |
| Person to Supervise the | IMHEN, MONRE & UNDP Sustainable Development Cluster |
| Work/Performance of the | |
| Service Provider | |
| Frequency of Reporting | Please refer to the TOR |
| Progress Reporting | Please refer to the TOR |
| Requirements | |
| Location of work | ☐ Exact Address: |
| | ☑ At Contractor's Location and provinces |
| Expected duration of work | October 2014 – January 2015 |
| Target start date | October 2014 |
| Latest completion date | January 2015 |
| Travels Expected | Please refer to the TOR |
| • | |
| Special Security | Not applicable |
| Requirements | |
| Facilities to be Provided by | ☐ Office space and facilities |
| UNDP (i.e., must be | ☐ Land Transportation |
| excluded from Price | ☐ Others [pls. specify] |
| Proposal) | 1 3/3 |
| Implementation Schedule | ☑ Required |
| indicating breakdown and | □ Not Required |
| timing of activities/sub- | ' |
| activities | |
| Names and curriculum | ☑ Required |
| vitae of individuals who will | □ Not Required |
| be involved in completing | · |
| the services | |
| | ☑ United States Dollars – for overseas bidders |
| Currency of Proposal | □ Euro |
| | ☑ Local Currency (Vietnam Dong) – for local bidders |
| | |
| | For the purposes of comparison of all Proposals: UNDP will convert the |
| | currency quoted in the Proposal into the UNDP preferred currency, in |
| | accordance with the prevailing UN operational rate of exchange on the |
| | proposal submission deadline. |
| Value Added Tax on Price | ☑ must be inclusive of VAT and other applicable indirect taxes |
| Proposal | ☐ must be exclusive of VAT and other applicable indirect taxes |
| | |
| Validity Period of Proposals | ☑ 120 days |
| | |

| (Counting for the last day of submission of quotes) | In exceptional circumstances, UNDP may request the Proposer to extend the validity of the Proposal beyond what has been initially indicated in this RFP. The Proposal shall then confirm the extension in writing, without any modification whatsoever on the Proposal. |
|---|---|
| Partial Quotes | ✓ Not permitted ☐ Permitted |
| Payment Terms | As indicated in Point 9 of the TOR. |
| | Condition for Payment Release: |
| | Within thirty (30) days from the date of meeting the following conditions: a) UNDP's written acceptance (i.e., not mere receipt) of the quality of the outputs; and b) Receipt of invoice from the Service Provider. |
| Person(s) to review/inspect/ approve outputs/completed services and authorize the disbursement of payment | IMHEN, MONRE & UNDP Sustainable Development Cluster |
| Type of Contract to be Signed | □ Purchase Order □ Institutional Contract or ☑ Contract for Professional Services □ Long-Term Agreement: □ Other Type of Contract |
| Criteria for Contract Award | □ Lowest Price Quote among technically responsive offers ☑ Highest Combined Score (based on the 70% technical offer and 30% price weight distribution) ☑ Full acceptance of the UNDP Contract General Terms and Conditions (GTC). This is a mandatory criteria and cannot be deleted regardless of the nature of services required. Non acceptance of the GTC may be grounds for the rejection of the Proposal. |
| Criteria for the Assessment of Proposal | Proposal shall be considered technically qualified if it achieves minimum 70% of total obtainable technical points. |
| | Weight of technical and financial point: |
| | Technical Proposal (70%) |
| | Financial Proposal (30%) Financial score will be computed as a ratio of the Proposal's offer to the lowest price among the proposals received by UNDP. |
| | See detailed evaluation criteria in the below table. |
| UNDP will award the contract to: | ☑ One bidder |

| | ☑ Form for Submission of Proposal (Annex 2a: Technical proposal; Annex 2b: |
|---------------------------------------|--|
| Annexes to this RFP | Financial proposal; Annex 2-c: Submission check-list) |
| | ☑ General Terms and Conditions (Annex 3) ¹ |
| | ☑ Detailed TOR (Annex 4) |
| | ☑ Institutional contract for service & Contract for Professional services |
| | (Annex 5) |
| | ☐ Long Term Agreement (Annex 6) |
| | |
| Contact Person for | Ms. Nguyen Thi Hoang Yen |
| Inquiries | Procurement Associate, UNDP Vietnam |
| (Written inquiries only) ² | Email: nguyen.thi.hoang.yen@undp.org |
| | |
| | Any delay in UNDP's response shall be not used as a reason for extending the |
| | deadline for submission, unless UNDP determines that such an extension is |
| | necessary and communicates a new deadline to the Proposers. |
| Other information | |
| | |

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¹ Service Providers are alerted that non-acceptance of the terms of the General Terms and Conditions (GTC) may be grounds for disqualification from this procurement process.

² This contact person and address is officially designated by UNDP. If inquiries are sent to other person/s or address/es, even if they are UNDP staff, UNDP shall have no obligation to respond nor can UNDP confirm that the query was received.

EVALUATION CRITERIA:

| Summary of Technical Proposal | | Score | Points | oints Company / Oth | | er Entity | | |
|-------------------------------|--|-------|------------|---------------------|---|-----------|---|---|
| Evalu | Evaluation Forms | | Obtainable | Α | В | С | D | Е |
| 1. | Expertise of Firm/Organisation submitting Proposal | 15% | 150 | | | | | |
| 2. | Proposed Work Plan and Approach | 35% | 350 | | | | | |
| 3. | Personnel | 50% | 500 | | | | | |
| | Total | | 1000 | | | | | |

Evaluation forms for technical proposals follow on the next two pages. The obtainable number of points specified for each evaluation criterion indicates the relative significance or weight of the item in the overall evaluation process. The Technical Proposal Evaluation Forms are:

- Form 1: Expertise of Firm /Organisation Submitting Proposal
- Form 2: Proposed Work Plan and Approach
- Form **3:** Personnel

| Tech | nical Proposal Evaluation Points Company / Other E | | er Entit | у | | | |
|------|---|------------|----------|---|---|---|---|
| Form | 1 | obtainable | Α | В | С | D | E |
| Expe | rtise of firm /organisation submitting proposal | | | | | | |
| 1.1 | Do the organization, staff and general reputation of the firm indicate competence and reliability? | 45 | | | | | |
| 1.2 | Are the firm's knowledge, experience and size relevant to the project? | 15 | | | | | |
| 1.3 | Have similar projects been carried out for other major multi- or bilateral clients? | 60 | | | | | |
| 1.4 | Does the firm have relevant experience in Vietnam? | 20 | | | | | |
| 1.5 | What is the extent of the organizational capability of the firm or association implementing the services required (i.e. loose consortium, holding company or one firm/institution)? | 10 | | | | | |
| | Total Part 1 | 150 | | | | | |

| Technical Proposal Evaluation | | Points | Company / Other Entity | | | | | |
|-------------------------------|--|------------|------------------------|--|--|---|--|--|
| Form | n 2 | Obtainable | e A B C D | | | E | | |
| Unde | erstanding, Work plan and Approach | | | | | | | |
| 2.1 | Understanding of the TOR (Is the scope of the task well-defined and does it correspond to the TOR without simply duplicating the TOR?) | 50 | | | | | | |

| 2.2 | Technical approach and methodology (Are | 200 | | | |
|-----|---|-----|--|--|--|
| | sufficient details provided regarding the | | | | |
| | proposed approach?) | | | | |
| 2.3 | Work plan (logicality and practicality) | 50 | | | |
| 2.4 | Adequate and qualified team to handle the | 50 | | | |
| | scope of work in the TOR | | | | |
| | Total Part 2 | 350 | | | |

| Tec | hnical Proposal Evaluation | Points | | Compar | ny / Oth | er Entit | .y | |
|---------|--|-----------|------------|--------|----------|----------|----|---|
| Fori | m 3 | | Obtainable | Α | В | С | D | E |
| | | | | | | | | |
| 3. 1 | Team Leader | | 300 | | | | | |
| | - Qualifications: Doctor/Master degree | | 50 | | | | | |
| | - At least 5 years experience in data analysis a algorrithms development. Having experience analysing data in condition for Viet Nam is an advantage | in | 100 | | | | | |
| | 5 years of experience in the analysis of RCM model simulations for the production of clima projections | te | 80 | | | | | |
| | - Has experiences in preparation Data and algorithms to compute relevant climate indice from climate simulation data of RCM model | es | 50 | | | | | |
| | Has ability to organize, manage complex task or lead a small-sized group of technical consultants | KS | 20 | | | | | |
| 3. 2 | Experts (team members) | | 200 | | | | | |
| | - Qualifications: Bachelor degree | | 30 | | | | | |
| | - Work experience: | | 170 | | | | | |
| | Have experience in data and algorithm for computation development | 50 | | | | | | |
| | Experience and in-depth professionalism regarding RCM data model simulations analysis and climate change scenario development | 70 | | | | | | |
| | Having experience in analysis on RCM model data for Viet Nam region is an advantage | 50 | | | | | | |
| | Total Part 3 | | 500 | | | | | |

FORM FOR SUBMITTING SERVICE PROVIDER'S TECHNICAL PROPOSAL³

(This Form must be submitted only using the Service Provider's Official Letterhead/Stationery⁴)

[insert: Location]. [insert: Date]

To: Procurement Unit - UNDP Vietnam

Dear Sir/Madam:

We, the undersigned, hereby offer to render the following services to UNDP in conformity with the requirements defined in the RFP dated [specify date], and all of its attachments, as well as the provisions of the UNDP General Contract Terms and Conditions:

A. Qualifications of the Service Provider

The Service Provider must describe and explain how and why they are the best entity that can deliver the requirements of UNDP by indicating among others the following with appropriate supporting documents:

- a) Profile describing the nature of business, field of expertise, licenses, certifications, accreditations;
- b) Business Licenses Registration Papers, Tax Payment Certification, etc.
- c) Latest Audited Financial Statement income statement and balance sheet to indicate Its financial stability, liquidity, credit standing, and market reputation, etc.;
- d) Track Record list of clients for similar services as those required by UNDP, indicating description of contract scope, contract duration, contract value, contact references;

| Name of project | Client | Contract Value | Period of activity | Types of activities undertaken | Status or Date Completed | References Contact Details (Name, Phone, Email) |
|-----------------|--------|-------------------|--------------------|--------------------------------|--------------------------------|--|
| | | | | | | |
| | | | | | | |

f) Certificates and Accreditation – including Quality Certificates, Patent Registrations, Environmental Sustainability Certificates, etc.

g) Written Self-Declaration that the company is not in the UN Security Council 1267/1989 List, UN Procurement Division List or Other UN Ineligibility List.

<u>Important Notes</u>: Please refer to the detailed evaluation criteria in the above table for proving appropriate information and supporting documents to desmontrate the bidders' capacity

³ This serves as a guide to the Service Provider in preparing the Proposal.

⁴ Official Letterhead/Stationery must indicate contact details – addresses, email, phone and fax numbers – for verification purposes

B. Proposed Methodology for the Completion of Services

The Service Provider must describe how it will address/deliver the demands of the RFP; providing a detailed description of the essential performance characteristics, reporting conditions and quality assurance mechanisms that will be put in place, while demonstrating that the proposed methodology will be appropriate to the local conditions and context of the work.

C. Qualifications of Key Personnel

The Service Provider must provide:

- a) Names and qualifications of the key personnel that will perform the services indicating who is Team Leader, who are supporting, etc.;
- b) CVs demonstrating qualifications must be submitted if required by the RFP; and
- c) Written confirmation from each personnel that they are available for the entire duration of the contract.

We agree to abide by this Proposal for 120 days from the date of proposal submission deadline.

[Name and Signature of the Service Provider's Authorized Person][Designation]
[Date]

FORM FOR SUBMITTING SERVICE PROVIDER'S FINANCIAL PROPOSAL⁵

(This Form must be submitted only using the Service Provider's Official Letterhead/Stationery⁶)

The Proposer is required to prepare the Financial Proposal in an envelope separate from the rest of the RFP as indicated in the Instruction to Proposers.

The Financial Proposal must provide a detailed cost breakdown. Provide separate figures for each functional grouping or category.

Any estimates for cost-reimbursable items should be listed separately.

In case of an equipment component to the service provider, the Price Schedule should include figures for both purchase and lease/rent options. UNDP reserves the option to either lease/rent or purchase outright the equipment through the Contractor.

The format shown on the following pages is suggested for use as a guide in preparing the Financial Proposal. The format includes specific expenditures, which may or may not be required or applicable but are indicated to serve as examples.

A. Cost Breakdown per Deliverable*

| | Deliverables [list them as referred to in the RFP] | Percentage of Total Price (Weight for payment) | Price (Lump Sum, All Inclusive) |
|---|--|---|---------------------------------------|
| 1 | Deliverable 1 | | |
| 2 | Deliverable 2 | | |
| 3 | | | |
| | Applicable taxes | | |
| | Total | 100% | |

B. Cost Breakdown by Cost Component [This is only an Example]:

| Description of Activity | Remuneration | Total Period of | No. of | Total Rate |
|--------------------------------|------------------|------------------------|-----------|------------|
| | per Unit of Time | Engagement | Personnel | |
| I. Personnel Services | | | | |
| 1. Services from Home Office | | | | |
| a. Expertise 1 | | | | |
| b. Expertise 2 | | | | |
| 2. Services from Field Offices | | | | |
| a . Expertise 1 | | | | |
| b. Expertise 2 | | | | |
| 3. Services from Overseas | | | | |
| a. Expertise 1 | | | | |
| b. Expertise 2 | | | | |
| II. Out of Pocket Expenses | | | | |
| 1. Travel Costs | | _ | | |
| 2. Daily Allowance | | | | |

⁵ This serves as a guide to the Service Provider in preparing the Proposal.

⁶ Official Letterhead/Stationery must indicate contact details – addresses, email, phone and fax numbers – for verification purposes

| 3. Communications | | |
|--------------------------|--|--|
| 4. Reproduction | | |
| 5. Equipment Lease | | |
| 6. Others | | |
| III. Other Related Costs | | |
| Applicable taxes | | |

We agree to abide by this Proposal for 120 days from the date of proposal submission deadline.

[Name and Signature of the Service Provider's Authorized Person]
[Designation]
[Date]

CHECK LIST OF DOCUMENTS SUBMITTED BY BIDDERS

<u>Note</u>: Bidders are required to review carefully this checklist before submission to ensure complete submission

| Item | Documents | To be completed by bidders | | |
|------|--|----------------------------|-----------------|---------|
| | | Doc submitted Y/N | Number of pages | Remarks |
| Α | Fully filled Technical proposal (Following template in Annex 2-a) including: | | | |
| 1 | Company profile – describing the nature of business, field of expertise, licenses, certifications, accreditations | | | |
| 2 | Business Licenses | | | |
| 3 | Track Record – list of clients for similar services indicating description of contract scope, contract duration, contract value, contact references | | | |
| 4 | Quality control systems to ensure quality of the required service | | | |
| 5 | Written Self-Declaration that the company is not in the UN Security Council 1267/1989 List, UN Procurement Division List or Other UN Ineligibility List. | | | |
| 6 | Proposed methodology | | | |
| 7 | CVs of key personnel | | | |
| В | Dully signed Price Schedule (following template in Annex 2-b) | | | |
| С | This duly filled, checked, certified submission checklist to be attached to the submission | | | |

[Name and Signature of the Service Provider's Authorized Person]
[Designation]
[Date]

TERMS OF REFERENCE

Provision of Services: Technical Support in Development of Climate Scenarios in Viet Nam – Preparation

of National Projections (Package 2 – CCAM & RegCM Models)

Project ID and title: UNDP/MONRE – Capacity Building for Implementation of National Climate Change

Strategy Project (CBICS)

Capacity Building for Implementation of National Climate Change Strategy Project (CBICS)" was approved by the Prime Minister in March 2014, expected to be

implemented in 4 years (2014 – 2018) with technical support from the UNDP

Expectation Time: October 2014 – January 2015

Supervision: IMHEN, MONRE & UNDP Sustainable Development Cluster

1) GENERAL BACKGROUND

The results from scientific research worldwide and in Viet Nam has shown that climate change is imposing greater impacts on the activities of socio-economic development and environmental protection in all regions, which has become one of the greatest challenges to sustainable development of humanity in general and to Viet Nam in particular. Being aware of the effects of climate change to the country's development, the Government of Viet Nam has gradually strengthened legal frameworks on climate change. The National Target Program to Respond to Climate Change (NTP-RCC) was issued in 2008 and 2012, the National Strategy and the National Action Plan on Climate Change was approved in 2011 and 2012, respectively. Lately, the Party General Secretary signed the Resolution No. 24-NQ/TW of actively responding to climate change and strengthening natural resource management and environment protection on 3/6/2013. The Climate Change and Sea Level Rise Scenarios for Vietnam, led by the Ministry of Natural Resources and Environment (MoNRE) was developed and published in 2009 and updated in 2012 and to be updated in 2015.

In response to the needs of the Government to implement the priorities set forth in the NTP-RCC, with the funding from UNDP, MONRE implementing the project entitled "Capacity Building for Implementation of National Climate Change Strategy Project (CBICS)". The Viet Nam Institute of Meteorology, Hydrology and Climate Change (IMHEN) of MONRE was assigned to be the Co-implementing partner for this project. The Project aims to support the building of awareness, institutional, scientific and technical capacity for the effective implementation of the National Strategy on Climate Change at ministries and localities. In order to achieve the project objectives, there is a need for technical services from an institution with top scientific knowledge and experience in climate modelling and in the production of credible climate change projections.

IMHEN is preparing information about Viet Nam's future climate from a number of climate models in order to release National projections in 2015. Climate projections for Viet Nam have been generated using a number of different regional climate modelling systems, including a number of different GCM and RCM combinations. There remains an existing need to analyse these simulations in order to assess the realism of the simulations; provide impact-relevant indices from the raw data from the simulations and provide assessments of uncertainty based on results from multiple models.

A recently completed Australian DFAT funded project, High-resolution Climate Projections for Vietnam, 2012-2013, a collaborative project between CSIRO, IMHEN and HUS, produced a range of dynamically downscaled data. Climate projection data is available at 10 km resolution over Vietnam from six GCMs and two RCPs using the CSIRO Conformal Cubic Atmospheric Model. In addition, data is also available at 20 km over Vietnam from two GCMs and two RCPs for time periods 1980-2000, 2045-2065 and 2080-2099 using

the RegCM model. These data were analysed and presented in Summary and Regional reports (available at http://vnclimate.vn) and a Technical Report. These results will be the basis for the work in this TOR.

UNDP is seeking for the most competent service provider to provide climate projections for Viet Nam from data generated by the CCAM and RegCM model simulations.

2) OBJECTIVES OF THE ASSIGNMENT

To provide future climate projections from existing data generated by high resolution regional climate models (CCAM and RegCM) using a credible and consistent methodology.

3) SCOPE OF WORK

Analysis of existing CCAM and RegCM data in order to assess the realism of the simulations; provide impact-relevant indices from the raw data from the simulations and provide assessments of uncertainty based on results from multiple models.

Data from the six 10 km and 50 km Conformal Cubic Atmospheric Model simulations from 1970 to 2099 for RCP4.5 and 8.5 will be used (RCP4.5 only from 2006 onwards). RegCM data at 20 km for two GCMs and for periods 1980-2000, 2045-2065 and 2080-2099 will also be used. In addition, available GCM data will also be used.

4) DURATION OF ASSIGNMENT, DUTY STATION

Duration: October t 2014 – Dec 2014

Duty station: Activities can be performed intermittently in Ha Noi and location of the service provider.

5) FINAL OUTPUTS/PRODUCTS

1. A detailed work plan for the consultancy services

- 2. Provision of an approach for summarising the results from different modelling systems climate projection data to illustrate uncertainty in future climate change projections
 - a. Provide algorithm to compute median and 80% confidence interval for all provincial and regional indices
 - b. Provide algorithm to compute statistical significance of changes (increase, no change and decrease)
 - Use IPCC confidence intervals
 - Explore other potential indices

Outputs:

A report including a justification for the approach used and examples of graphs/figures that summarise ensemble projections for key variables which could be used to present uncertainty ranges for National Projections; and guidance for interpretation for non-scientific readers.

3. Data and algorithms to compute relevant indices below from climate simulation data of different modelling systems

- a. Temperature including: (i) TAVE (average temperature); (ii) TX (maximum temperature); (iii) TN (minimum temperature); (iv) Hot days TX90p; (v) Cold nights TN10p; (vi) T35 (number of days with T>35 deg C; (vii) T13 (number of days with T<13 deg C)
- b. Humidity (surface)
- c. Wind Speed (surface)
- d. Solar radiation (surface)
 - Heavy Rainfall including: (i) RX1; (ii) RX5; (iii) R95p; (iv) CWD; (v) CDD.

Outputs:

- <u>Seasonal and annual</u> data at <u>provincial and regional</u> level for historical period (1986-2005), and projections under RCPs 4.5 and 8.5 2006-2099.
- Guidance for interpreting the results.

4. Data and algorithms to compute relevant indices below from climate simulation data of different modelling systems

- a. Droughts using Standardised Precipitation Index (SPI).
- b. Heatwaves using Heat Wave Duration Index (HWDI)

Outputs:

- Annual data at provincial and regional level for historical period (1986-2005), and projections under RCPs 4.5 and 8.5 2006-2099.
- Guidance for interpreting the results.

5. Data and algorithms to compute relevant indices below from climate simulation data of different modelling systems

- a. Monsoon start date
- b. Monsoon end date
- c. Monsoon intensity

Outputs:

Projected annual changes in monsoon change for seven climate region in Vietnam, including figures/graphs which could be reproduced in National Projection materials.

6. Data and algorithms to compute tropical cyclone frequency and intensity from climate simulation data of different modelling systems

a. Analysis of Tropical Cyclone characteristics under climate change scenarios, and assessment of uncertainties in Tropical Cyclone changes

Outputs:

Projected changes in Tropical Cyclones for Vietnam defined ocean regions, including figures/graphs which could be reproduced in National Projection materials.

7. Workshop to discuss results, complete analyses and prepare draft National Projections

2 days workshop in December 2014 in Hanoi for 30 participants, of which 25 persons from Hanoi and 05 persons from Ho Chi Minh city nominated by project in consultation with the UNDP and contractor.

The workshop aims to consult and discuss on the result of the climate projection and how to use for CC scenarios development. The workshop arrangement and workshop cost (meeting room, per diem for workshop participants (if any) ect..) will be undertaken and covered by the contractor in line with the updated UN-EU cost norm attached.

Outputs:

Report on analysis of climate projections for Vietnam and recommendation for using the result for development of CC scenarios.

8. Enhance Climate Futures Tool

- a. Make Vietnamese version of Climate Futures Tool
- b. Ensure all model data is included in tool provision for IMHEN to upload data once in correct format

9. Computation of ensembles from different modelling systems climate projection data to display the median and the uncertainty in future climate change projections

- a. Provide algorithm to compute median and 80% confidence interval for all provincial and regional indices
- b. If regional climate projection data is available in the same form as produced in this TOR, they will be included in the ensemble calculation.

Outputs:

Multi-model ensemble statistics at provincial and regional levels for the various climate model projection data and for the indices indicated in the TOR.

6) PROVISION OF MONITORING AND PROGRESS CONTROLS

Output-based fees will be paid as per approval of reports by the Implementing agency IMHEN and UNDP, who are responsible for monitoring the overall implementation of the service.

The service provider will undertake required services under the direct supervision of IMHEN and in close collaboration with the National Technical Officer and Project Manager (PM).

The results of work must meet the project and UNDP quality and procedures.

7) DEGREE OF EXPERTISE AND QUALIFICATIONS

Please see detailed qualification requirements in the evaluation table in the RFP.

8. ADMIN SUPPORT AND REFERENCE DOCUMENTS

- Projection data for Viet Nam at 10 km resolution from six GCMs and two RCPs using the CSIRO Conformal Cubic Atmospheric Model and the data at 20 km over Vietnam from two GCMs and two RCPs for time periods 1980-2000, 2045-2065 and 2080-2099 using the RegCM model are available at http://vnclimate.vn;
- The Technical Report on running CCAM for Viet Nam is assessable at http://vnclimate.vn.
- The Climate Change and Sea Level Rise for Viet Nam, version 2012 (attached)
- All related cost to organize the 2 day-workshop in Ha Noi will be covered by the selected bidder.
- List of workshop participants with contact address will be provided by the project;
- Introduction letter if required will be provided by the project

9. PAYMENT TERMS

Payment package is made in the following methods:

- + 20% of the total contract value is paid upon submission and acceptance of detailed work plan by IMHEN and UNDP
- + 80% is paid when final products are finalized and approved by IMHEN and UNDP

10. MINIMUM TECHNICAL THRESHOLDS

| Minimum technical threshold for this assignment is: | | | | | | |
|---|------------|------------|--|--|--|--|
| ⊠ 700/1000 | □ 750/1000 | □ 800/1000 | | | | |

11. COPY RIGHTS

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