

## **Meteorological Service of Jamaica (MSJ)**

### **ESTABLISHMENT OF A COMPREHENSIVE BUSH FIRE WARNING INDEX FOR EFFECTIVE BUSH FIRE MANAGEMENT**

### **CONSULTANCY FOR PUBLIC EDUCATION AWARENESS AND OUTREACH CAMPAIGN**

#### **REQUEST FOR EXPRESSIONS OF INTEREST**

The Government of Jamaica has received financing from the African Caribbean Pacific—European Union—Caribbean Development Bank Natural Disaster Risk Management (ACP-EU-CDB NDRM) programme, executed through the Caribbean Development Bank (CDB) in an amount equivalent to three hundred and twenty-seven thousand, nine hundred and twenty-five euros (EUR327,925) towards the cost of **Establishment of a Comprehensive Bush Fire Warning Index for Effective Bush Fire Management** Project and intends to apply a portion of the proceeds of this financing to eligible payments under a contract for which this invitation is issued.

Payments by CDB will be made only at the request of MSJ and upon approval by CDB and will be subject in all respects to the terms and conditions of the Financing Agreement. The Financing Agreement prohibits withdrawal from the 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 CDB, is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than MSJ shall derive any rights from the Financing Agreement or have any claim to the proceeds of the Financing.

MSJ, the Executing Agency, now wishes to procure consultancy services for the **Public Education Awareness and Outreach Campaign**

The primary objective of the consultancy is to assist MSJ in developing and implementing a gender sensitive and socially inclusive communication campaign to improve public education and awareness about bush fires in Jamaica inclusive of surveying the populous. The duration of the assignment is expected to be **20 days** over a period of **four (4) months**.

**MSJ** now invites interested eligible **individual consultants** to submit Expressions of Interest indicating qualifications and experience required to provide these consultancy services.

Consultants shall be eligible to participate if:

- (a) the persons are citizens or *bona fide* residents of an eligible country; and
- (b) in all cases, the consultant has no arrangement and undertakes not to make any arrangements, whereby any substantial part of the net profits or other tangible benefits of the contract will accrue or be paid to a person not a citizen or *bona fide* resident of an eligible country.

Eligible countries are outlined in **Appendix 1** below.

The Terms of Reference for the consultancy is in **Appendix 2**.

The attention of interested Consultants is drawn to paragraph 1.9 of CDB's Guidelines for the Selection and Engagement of Consultants (2011), setting forth CDB's policy on conflict of interest.

In the assessment of submissions, consideration will be given to qualifications and experience on similar assignments. All information must be submitted in English. Further information may be obtained from the first address below between 09:00 and 16:30 hours Monday to Friday.

**One** electronic copy of the Expressions of Interest must be received at the first address below no later than **17:00 hours on Wednesday, October 30, 2019** and one electronic copy must be sent simultaneously to CDB at the second address below. If submitting in hard copy, the sealed envelope containing each submission should include the name and address of the applicant and shall be clearly marked **“Expression of Interest – Consultancy Services for Public Education Awareness and Outreach Campaign.**

Following the assessment of submissions, the most technically capable and appropriately experienced applicant will be invited to negotiate a contract to provide the consultancy services. MSJ reserves the right to accept or reject late applications or to cancel the present invitation partially or in its entirety. It will not be bound to assign any reason for not engaging the services of any applicant and will not defray any costs incurred by any applicant in the preparation and submission of Expressions of Interest.

1. *Address 1*

**Attn: The Director**  
Meteorological Service Division  
65¾ Half Way Tree Road  
Kingston 10  
Jamaica  
West Indies.

**Tel: (876) 929-3694; 929-3700**

**Email: [procurement@metservice.gov.jm](mailto:procurement@metservice.gov.jm)**

2. *Address 2*

**Attn: Procurement Officer**  
Caribbean Development Bank  
Wilkey, St. Michael  
**BARBADOS, W.I.**  
Tel: (1-246) 431-1600  
Fax: (1-246) 426-7269

**Email: [procurement@caribank.org](mailto:procurement@caribank.org)**

**EUROPEAN UNION ELIGIBILITY RULES**  
**AFRICAN CARIBBEAN PACIFIC – EUROPEAN UNION**  
**NATURAL DISASTER RISK MANAGEMENT**

**PARTICIPATION IN PROCEDURES FOR THE AWARDING OF**  
**PROCUREMENT CONTRACTS OR GRANT CONTRACTS**

1. Participation in procedures for the award of procurement contracts financed under the EU Contribution Agreement for the Implementation for the Action entitled: “Africa Caribbean Pacific – European – Caribbean Development Bank (ACP-EU-CDB) Natural Disaster Risk Management in CARIFORUM Countries” (ACP – EU NDRM Resources)”, is open to international organisations and all natural persons who are nationals of, or legal persons who are established in, an eligible country.

2. Eligible countries<sup>1</sup> are deemed to be:

(a) Caribbean Development Bank member countries:

Anguilla, Antigua and Barbuda, Barbados, Belize, Brazil, British Virgin Islands, Canada, Cayman Islands, China, Columbia, Dominica, Germany, Grenada, Guyana, Haiti, Jamaica, Italy, Mexico, Montserrat, St Kitts and Nevis, Saint Lucia, St Vincent and the Grenadines, Suriname, The Bahamas, Trinidad and Tobago, Turks and Caicos Islands, the United Kingdom and Venezuela.

(b) Members of the “African, Caribbean and Pacific (ACP) Group of States”<sup>2</sup>:

**Africa:**

South Africa<sup>3</sup>, Angola, Benin, Botswana, Burkina Faso, Burundi, Central African Republic, Cameroon, Cape Verde, Chad, Comoros Islands, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Equatorial Guinea, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritius, Mauritania, Mozambique, Namibia, Niger, Nigeria, Uganda, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, Sudan, Swaziland, Tanzania, Togo, Zambia and Zimbabwe.

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<sup>1</sup> Note some countries may be eligible by virtue of more than one category

<sup>2</sup> Cotonou Partnership Agreement of 23 June 2000 (as amended by the provisional application of Decision No 1/2000 of the ACP-EC Council of Ministers of 27 July 2000, Decision No 1/2000 of the ACP-EC customs cooperation committee of 18 October 2000, Decision No 1/2001 of the ACP-EC customs cooperation committee of 20 April 2001, Decision No 2/2001 of the ACP-EC customs cooperation committee of 20 April 2001, Decision No 3/2001 of the ACP-EC customs cooperation committee of 10 May 2001, Decision No 4/2001 of the ACP-EC customs cooperation committee of 27 June 2001, Decision No 5/2001 of the ACP-EC customs cooperation committee of 7 December 2001, Decision No 2/2002 of the ACP-EC customs cooperation committee of 28 October 2002, Decision No 1/2003 of the ACP-EC Council of Ministers of 16 May 2003, Council Decision (EC) of 19 December 2002, Decision No 1/2004 of the ACP-EC Council of Ministers of 6 May 2004, Decision No 2/2004 of the ACP - EC customs cooperation committee of 30 June 2004 and Decision No 4/2005 of the ACP-EC customs cooperation committee of 13 April 2005).

<sup>3</sup> Natural and legal South African persons are eligible to participate in contracts financed by the 10th/11th EDF. However, the 10th/11th EDF does not finance contracts in South Africa.

**Caribbean:**

Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago.

**Pacific:**

Cook Islands, East Timor, Fiji, Kiribati, Marshall Islands, Micronesia, Nauru, Niue, Palau, Papua New Guinea, the Solomon Islands, Western Samoa, Tonga, Tuvalu, Vanuatu.

**Overseas Countries and Territories:**

Anguilla, Antarctic, Netherlands Antilles, Aruba, British Indian Ocean Territory, British Virgin Islands, Cayman Islands, Falkland Islands (Malvinas), French Polynesia, French Southern Territories, Greenland, Mayotte, Montserrat, New Caledonia, Pitcairn, Saint Helena, Saint Pierre and Miquelon, South Georgia and South Sandwich Islands, Turks and Caicos, Wallis and Futuna Islands.

(c) **A Member State of the European Union:**

Austria, Belgium, Bulgaria, Croatia, Czech Republic, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom.

**An official candidate country of the European Union:**

The Former Yugoslav Republic of Macedonia, Turkey, Iceland, Montenegro.

**A Member State of the European Economic Area:** Iceland, Lichtenstein, Norway.

(d) **All natural persons who are nationals of, or legal persons who are established in, a Least Developed Country as defined by the United Nations:**

Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Central African Republic, Chad, Comoros, Dem. Rep. Congo, Equatorial Guinea, Eritrea, Ethiopia, Guinea, Guinea-Bissau, Haiti, Kiribati, Lao PDR, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Djibouti, Solomon Islands, Somalia, South Sudan, Sudan, Tanzania, The Gambia, Timor-Leste, Togo, Tuvalu, Uganda, Vanuatu, Yemen, Rep. and Zambia.

(e) **Participation in procedures for the award of procurement contracts or grants financed from the Facility shall be open to all-natural persons who are nationals of, or legal persons established in, *any country other than those referred to in paragraph 1, where reciprocal access to external assistance has been established.* Reciprocal access in the Least Developed Countries as defined by the United Nations (UN) shall be automatically granted to the OECD/DAC members: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Korea, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United**

Kingdom, United States.

3. Services under a contract financed from the Facility may be provided by experts of any nationality, without prejudice to the qualitative and financial requirements set out in the Bank's procurement rules.

4. Supplies and materials purchased under a contract financed from the Facility must originate in a State that is eligible under paragraph 1. In this context, the definition of the concept of 'originating products' shall be assessed by reference to the Bank's prevailing procurement guidelines/procedures, and supplies originating in the EU shall include supplies originating in the Overseas Countries and Territories.

5. Whenever the Facility finances an operation implemented through an international organisation, participation in procedures for the award of procurement contracts or grants shall be open to all natural and legal persons who are eligible under paragraphs 1, care being taken to ensure equal treatment of all donors. The same rules apply for supplies and materials.

6. Whenever the Facility finances an operation implemented as part of a regional initiative, participation in procedures for the award of procurement contracts or grants shall be open to all natural and legal persons who are eligible under paragraph 1, and to all natural and legal persons from a country participating in the relevant initiative. The same rules apply for supplies and materials.

7. Whenever the Facility finances an operation co-financed with a third entity, participation in procedures for the award of procurement contracts or grants shall be open to all natural and legal persons eligible under paragraph 1, and to all persons eligible under the rules of the third entity. The same rules shall apply to supplies and materials.

**Caveat:** The Bank and EU eligibility requirements are subject to change by the Bank and the EU. The applicant is responsible for checking whether there have been any updates on the eligibility requirements, as well as the UN's list of Least Developed Countries.

**PUBLIC EDUCATION AWARENESS AND OUTREACH**  
**CAMPAIGN CONSULTANT**

**TERM OF REFERENCE**

**BACKGROUND**

1.01 The African Caribbean Pacific—European Union—Caribbean Development Bank Natural Disaster Risk Management (ACP-EU-CDB NDRM) programme is a part of the Caribbean component of the 10<sup>th</sup> European Development Fund Intra-ACP Cooperation Strategy (2008-2013) in which the ACP Group and the EU recognised the need to increase efforts with regard to ex ante Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA). The ACP-EU-CDB NDRM programme aims at reducing the vulnerability to long-term impacts of natural hazards, including the potential impacts of climate change (CC), thereby achieving regional and national sustainable development and poverty reduction goals in the CARIFORUM Countries. The programme comprises four Result Areas (RAs) being managed by three implementing partners, the Caribbean Disaster Emergency Management Agency (CDEMA) (RA 1); CDB (RA 2 and RA 3); and the Ministry of the Presidency of the Dominican Republic (RA 4). CDB's components focus on strengthening regional, national and community level capacities for mitigation, preparedness, management and coordinated response to natural hazards and the effects of CC. The four RAs are:

- (a) RA 1 - Capacity of National Disaster Management Offices and CDEMA Coordinating Unit Strengthened for Implementation of Comprehensive Disaster Management.
- (b) RA 2 - National, Local and Regional Resilience Enhanced through Strengthened Early Warning, National Risk Profiling and Community-based DRR.
- (c) RA 3 - Sector Resilience Strengthened in Key Public Sectors, through DRR and CCA Mainstreaming.
- (d) RA 4 - Capacity building and the Establishment of Common Policies, Strategies, Programmes and Sub-programmes Undertaken as a Contribution

1.02 Bush fires occur naturally and play a role in the evolution of the landscape, soil fertility and biodiversity. Over the last two decades, an increase has been observed in the incidence of bush fires during the dry season (especially January-March) and especially during periods of severe drought in Jamaica. An increase in the risk of droughts has been predicted with the occurring global warming<sup>1</sup> resulting from human activities that contribute to increasing concentrations of greenhouse gases in the atmosphere. Thus, it can be inferred that climate variability and climate change will likely result in an ever-increasing number of drought-induced bush fires in Jamaica.

1.03 Bush fires have caused significant negative socio-economic impacts particularly on property and the agriculture and forestry sectors in Jamaica. Between 1996 and 2005, damage and losses in agriculture due to bush fires were estimated at USD0.7 million (mn) over the

years<sup>2</sup>. In 2014, the Rural Agricultural Development Authority reported over 1,600 hectares of land valued at over USD8.33 mn was lost or

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<sup>1</sup> Intergovernmental Panel on Climate Change (IPCC), 2014. CC 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the IPCC [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp.

<sup>2</sup> Selvaraju, Ramasamy, et al. CC and agriculture in Jamaica: Agricultural sector support analysis. Food and Agriculture Organization of the United Nation, 2013.

damaged due to drought and fires and affected over 16,000 farmers<sup>1</sup>. In 2015, 7,261 of such fires occurred. In May 2015, a bush fire event in rural St. Andrew, destroyed approximately 367 hectares of forest cover<sup>2</sup>, contributing to an increase in air pollution with adverse impact on human health, as well as the removal of key carbon sinks. Currently, bush fires account for 63<sup>0</sup>/0<sup>5</sup> of the total number of emergency calls to the Jamaica Fire Brigade (JFB).

1.04 The Meteorological Services of Jamaica (MSJ) in collaboration with the International Research Institute for Climate and Society and the Caribbean Institute for Meteorology and Hydrology have worked to develop a one-to-five-day forecast tool which attempts to predict likely outbreaks of bush fires. This is done via the use of the Keetch-Byram Drought Index (KBDI), which was developed by John Keetch and George Byram in 1968 to specifically assess forest fire potential. This drought index represents the net effect of evapotranspiration and precipitation in producing loss in moisture content of the upper level of the soil including organic matter. The KBDI is computed from annual precipitation, daily precipitation and daily maximum temperature. The values of the KBDI ranges from 0-800, with higher values indicating drier conditions and higher risk of fire.

1.05 Although KBDI is useful for fire potential assessment, its application as an early warning tool and decision-making aid for fire management is limited as the index lacks customisation to local conditions and does not include other key factors of fire behaviour such as vegetation (sometimes termed as fuel loading) and topography. For instance, while weather conditions mainly influence the start of a bush fire, it is the vegetation and topography that dictate the maintenance and spread of fire. Under similar weather conditions, two zones with a different vegetation (e.g. grass versus trees) will experience a different bush fire behaviour. Generally grasslands are more conducive to fires than forests as the latter is coarser and slower to combust. When weather conditions and vegetation are similar, zones with differing gradient (e.g. flat land versus sloping) will not exhibit the same bush fire behaviour. Fires will tend to spread faster on a slope than on flat ground. Therefore, integrating weather, vegetation and topography in the determination of the bush fire index will increase its accuracy.

1.06 The development of a robust model aside, a common alerting protocol and public education and awareness are critical to ensure timely preparation and effective response to bush fires. Following a series of devastating fires that affected farms in Mavis Bank, St. Andrew, and Nain in St. Elizabeth, Jamaica in 2015, JFB launched a Community Bush Fire Management Education Programme, which has shown great success. At October 2016, no incident of fire was observed in Mavis Bank, where fires destroyed acres of farmland last year. A key element of this success is due to local community involvement in the programme.

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<sup>3</sup> <http://jis.gov.jm/statement-drought-conditions-impact-agricultural-sector>.

<sup>4</sup> <http://jis.gov.jm/bush-fires-have-destroyed-hundreds-of-acres>.

<sup>5</sup> Average between 2007 and 2014 – AGD Performance Audit Report of the JFB.



1.07 The Government of Jamaica through the MSJ is proposing to develop a comprehensive Jamaican Bush Fire Warning Index to determine critical thresholds for outbreaks under different conditions for effective bush fire management. The current proposal include four components: (a) development of a multicriteria model weighing KBDI, including topography and vegetation factors; (b) pilot sites monitoring; (c) development of an alerting protocol; and (d) public education and awareness campaign. This work requires an interdisciplinary approach and inter-agency coordinated effort. The consultancy will assess the current level of public awareness to bush fires and design an effective communication campaign building upon the previously successful JFB's Community Bush Fire Management Education Programme.

## OBJECTIVES

2.01 The primary objective of the consultancy is to assist MSJ in developing and implementing a gender sensitive and socially inclusive communication campaign to improve public education and awareness about bush fires in Jamaica.

## SCOPE OF WORK

3.01 The scope of services is understood to cover all activities necessary to accomplish the objectives, whether or not a specific activity is cited in these Terms of Reference (TOR). The draft TOR will be finalised based on discussions between MSJ and the Consultant. A participatory and consultative approach is encouraged in carrying out the services.

3.02 Specific duties and responsibilities of the Consultant include:

- (a) conducting surveys on the level of population awareness on bushfires including vulnerable groups like women, youth, the elderly and persons with disabilities;
- (b) designing advertising materials for public education and awareness on bush fires targeting different population groups including vulnerable ones like women, youth, the elderly and persons with disabilities;

## QUALIFICATIONS AND EXPERIENCE

4.01 The Consultant is required to have recognised credentials (Master's degree and five years' experience, or Bachelor's degree and seven years' experience) in Communication and Public Relations, Disaster Risk Management, Environmental Studies, or related fields.

4.02 The consultant shall also possess:

- (a) working experience of successfully implementing projects to bring awareness to an environmental issue;
- (b) excellent oral and written communication skills; and
- (c) good research and analytical skills.

## REPORTING REQUIREMENTS AND DELIVERABLES

5.01 The Consultant will be required to provide the following reports and deliverables:

- (a) Two periodic survey reports.
- (b) Designs for brochure, flyer, billboard, bus stops and bus wraps

### DURATION

6.01 The duration of the consultancy is 20 days over a period of Four months.