

REQUEST FOR EXPRESSIONS OF INTEREST CONSULTING SERVICES

Selection # as assigned by e-Tool: RG-E1594-P001

Selection Method: Simplified Competitive Selection

Country: Regional

Sector: Water and Sanitation INE/WSA

Project #: RG-E1594

TC name: Water footprint and virtual water of main economic sectors: A WEF Nexus Analysis

Description of Services: Consultancy for Water footprint and virtual water of main economic sectors: A WEF Nexus Analysis

The Inter-American Development Bank (IDB) is executing the above mentioned operation. For this operation, the IDB intends to contract consulting services described in this Request for Expressions of Interest. Expressions of interest must be delivered using the IDB Portal for Bank Executed Operations (<http://beo-procurement.iadb.org/home>) by November 7th, 2018, 5:00 P.M. (Washington D.C. Time).

The consulting services (“the Services”) include the quantification the economic trade-offs between food (land), water and energy (FEW) associated with main economic sectors (agriculture, energy production and electricity generation, industry and mining, and urban) in selected LAC economies (countries) and to provide long term scenarios that highlight forthcoming policy challenges. In particular, it will examine the economic conditions for these sectors development under different scenarios (i.e. policy, climate, socio-economic, technology...) in the LAC region (country level analysis), including a subnational assessment in one of the main economies (Brazil, Argentina, Mexico, Chile), to be selected according to data availability and in agreement with IDB staff.

The estimated time for the realization of the Consultancy is 12 months and the start of services is expected by February 2019.

Eligible consulting firms will be selected in accordance with the procedures set out in the Inter-American Development Bank: [Policy for the Selection and Contracting of Consulting firms for Bank-executed Operational Work](#) - GN-2765-1. All eligible consulting firms, as defined in the Policy may express an interest. If the Consulting Firm is presented in a Consortium, it will designate one of them as a representative, and the latter will be responsible for the communications, the registration in the portal and for submitting the corresponding documents.

The IDB now invites eligible consulting firms to indicate their interest in providing the services described below in the [draft summary](#) of the intended Terms of Reference for the assignment. Interested consulting firms must provide information establishing that they are qualified to perform the Services (brochures, description of similar assignments, experience in similar conditions, availability of appropriate skills among staff, etc.). Eligible consulting firms may associate in a form of a Joint Venture or a sub-consultancy agreement to enhance their qualifications. Such association or Joint Venture shall appoint one of the firms as the representative.

Interested eligible consulting firms may obtain further information during office hours, 09:00 AM to 05:00

PM, (Washington D.C. Time) by sending an email to: Giulia Carcasci - GIULIAC@IADB.ORG

Inter-American Development Bank

Division: Water and Sanitation Division (INE/WSA)

Attn: Giulia Carcasci, INE/WSA

1300 New York Ave, NW, Washington DC 20577, USA

Tel: +1 202 623-2214

Fax: 202-312-4197

E-mail: Giulia Carcasci - GIULIAC@IADB.ORG

Web site: www.iadb.org

Draft Summary of Terms of Reference

The interdependency between land (food), energy, and water systems is growing with the increasing demand for these vital resources. Water and energy are highly interdependent and key limiting resources for production and consumption and at the same time there is increasing competition for these valuable resources from other economic sectors. Several world regions, including Latin American and Caribbean (LAC), are already experiencing food, energy and water security challenges which adversely affect sustainable economic development. There are multiple stressors at both the local and global scale that imposes pressures on the food-energy-water (FEW) nexus, including growing population, increasing degradation of ecosystem, and climate change.

In an increasingly globalized world, a local economy is no longer constrained by what is available within the region; urban centers consume from global markets. To illustrate the spatial linkages between production and consumption across the globe and project future demand of natural resources, this project will develop a global input-output modeling framework that allows 1) calibrate demand scenarios for the products of the local economic sector based on forecasting of population growth and economic growth; 2) assess competing water and energy uses for energy production, agriculture, other economic sectors including household consumption in the study countries; 3) Assess the risk of resource constraint on future economic development in the LAC region e.g. value added, employment of skilled and unskilled labor.

In sum, this project will generate and apply an innovative methodology to: (i) calibrate FEW demand scenarios on the basis of alternate FEW sectors production expansion scenarios; (ii) assess associated FEW constraints and socio-economic tradeoffs; and (iii) discuss economic implications at the regional and national level for the selected countries.

In this project, we will focus on answering the following research questions:

- 1) What is the potential future increase in the output of the resource (water and land) intensive economic sectors, e.g. agriculture, gas and oil extraction, electricity, biofuels, in LAC countries as driven by an increasing global demand for resource-based products? [Other scenarios: NDCs, SDGs, Sectoral Policies]
- 2) How much additional water, land, and energy will be required for the different economic growth scenarios in the LAC countries by 2040? And what are the implications of future water demand on local water scarcity and land stress given the increasing competition with other water and energy intensive sectors, such as agriculture and power generation, and demand in urban agglomerations?
- 3) How climate change could aggravate those impacts and competition for resources?
- 4) How will future investments in these resource intensive sectors contribute to local economic growth (i.e. value added) and employment (i.e. skilled and unskilled labor)?

The consultancy's main activities and relate outputs will include:

1. Data collection and scenario design phase

2. Economic analysis model development and simulation
3. Draft and final Report, in the format of working paper to be submitted to scientific journal, including model framework and raw data (open format)
4. Development of a visualization tool or dashboard for the results of the research. The intended vision is to have this tool as a potential future IADB Observatory for WEF Security (which could be funded by new ESW or TC projects).
5. Dissemination activities