

MANAGING NATURAL GAS RESOURCES FOR SDG ACCELERATION IN MOZAMBIQUE: AN ECONOMY-WIDE MODELLING ASSESSMENT

–TERMS OF REFERENCE FOR INTERNATIONAL EXPERTS –

I. BACKGROUND

Mozambique is a country richly endowed with natural resources. It holds the third largest proven reserves of natural gas in the African continent, only after Nigeria and Algeria. It has vast deposits of coal in the central province of Tete. It holds around 5.5 percent of known global reserves of natural graphite and is the location of the world's largest deposit of this mineral, found in the northern province of Cabo Delgado. Its natural resource wealth also includes 5.6 million hectares of arable land, 377,000 square kilometers of forests, over 2,500 kilometers of coastline, as well as important river systems, including the Zambezi basin. In addition, it holds rich deposits of anything from gemstones to gold, marble, limestone and iron ore.

Its rich natural resource base places Mozambique in a unique position to attain its ambitions for prosperity and socioeconomic transformation. It can also help the country deliver on its commitments to implement the 2030 Agenda and achieve the Sustainable Development Goals by transforming its natural wealth into sustainable human development. The challenge is how to achieve this, and to do so in a context in which Mozambique's fast population growth, evolving socioeconomic conditions and its exposure to climate change impact on this same very natural resource base.

The case of gas is paradigmatic, in this sense. By some estimates, the exploration of Mozambique's natural gas reserves in Cabo Delgado could generate up to \$95 billion in government revenues over a 25-year period. This is equivalent to almost seven times Mozambique's current GDP. This revenue could prove critical in advancing Mozambique's ambitions for structural transformation and inclusive growth, as well as for accelerating progress towards achieving the SDGs. The government of Mozambique, however, will have to decide how best to use and invest these funds, based on existing socioeconomic conditions, government/national priorities, the actual policy options available to government and the expected development outcomes arising from these various scenarios.

In examining these issues, it is important to have a whole-of-system perspective that enables policy makers to understand better the interlinkages that may exist between different areas of interest (social, economic, environmental). For instance, between investments in education and labour market outcomes, between public investment and agricultural productivity, or between economic development and health outcomes. Such a perspective can help approach the policy making process in a more integrated manner that takes stock of synergies and trade-offs that may exist across various areas of policy intervention, as well as of the various sustainable development outcomes that may arise from the policy choices available to the government.

A number of modelling tools exist that can provide policymakers with this whole-of-system perspective, including system dynamics and computer general equilibrium models. While the latter have traditionally focused only on macroeconomic issues, recent developments in CGE modelling have seen extensions to incorporate human development and environmental concerns. These models can be used to run simulations on a variety of issues. From how external shocks may impact a country, in terms of likely

socioeconomic and, potentially, environmental outcomes, to examining how different policy interventions available to government affect sustainable development prospects and outcomes. In the case at hand, it could help illustrate outcomes arising from different uses that the government of Mozambique may wish to make of its natural gas wealth and do so across a whole range of areas: social, economic and environmental. For example, such modelling could be applied to run simulations to assess the sustainable returns from investing Mozambique natural gas wealth in education or investing it in infrastructure – or in a combination of both, and do so at different levels: e.g. prioritizing investments in primary education vs. investments in secondary or higher education. It can also help assess how best to sequence these investments, which can provide the elements of a strategy of how best to use this natural resource wealth in a way that maximizes its sustainable development outcomes over time.

II. OBJECTIVE OF CONSULTANCY ASSIGNMENT AND METHODOLOGICAL APPROACH

Against this background, the government of Mozambique, through the “SDG Integration” project that UNDP has with the Ministry of Economy and Finance (MEF), is seeking policy advice to support the prioritization of SDGs with higher impact, including through an analysis of potential SDG accelerators in the country. With its huge transformative potential, Mozambique’s natural resource wealth and, in particular its natural gas reserves, could play this accelerator role and contribute to achieve the SDGs in the country if well invested over the next decades.

To this end, UNDP is seeking to hire, on behalf of the Directorate of Economic and Development Policy at MEF, the services of a team of international experts to undertake SDG modelling work on these issues, with the following two objectives in mind:

1. Examine how best Mozambique can use its natural resource wealth, particularly its natural gas reserves, to maximize its potential impact on SDG attainment in the country.
2. Build capacities within the Ministry of Economy and Finance and other potential national partners to work with this type of modelling tools and frameworks.

From a policy research perspective, the assignment will take the form of a series of modelling simulations of scenarios capturing the possible uses that could be made of Mozambique’s natural resource wealth and natural gas revenue from 2020 to 2030. Each of these scenarios will examine different financing and investment options, as well as their potential impact on a selected number of socioeconomic and environmental indicators.

This work will be undertaken over a series of training and working sessions involving key partners in government and elsewhere, thereby contributing to the capacity development objective intended for this assignment. This approach will seek to get the involvement of key policy informants in the development of the policy scenarios underlying this study, while making participants conversant with this type of modelling analysis. In order to maximize its impact, both from a policy and capacity development perspective, this assignment will possibly involve participants beyond MEF, including staff from research centres affiliated with MEF, academia and INE.

The assignment will take place over a maximum period of four months, starting in April and ending in August 2021. It will tentatively involve the following three stages, although offerors are open to propose alternative approaches in their technical proposals to this request for proposals (RFP):

1. The first of these stages will involve an initial set of sessions that will serve to introduce the assignment and to define with MEF and other involved parties' specific objectives and deliverables for this modelling exercise. During this first stage, the international experts hired for this assignment will provide initial training on the principles of economywide/system modelling, as well as on the use of the modelling tools to be used for this exercise.
2. This first stage in the assignment will be followed by a second set of sessions involving hands-on modelling by participants, with support from the international experts hired for this assignment. This work will entail defining different policy scenarios for analysis of the possible uses that could be made of natural gas revenue, as well as running simulations on how these scenarios could play out over the period under analysis. Throughout this second set of working sessions, participants will examine and discuss these various modelling scenarios, comparing policy implications and plausible sustainable development outcomes.
3. Finally, in a third stage, the experts involved in this assignment, together with selected participants in this exercise, will produce a report capturing the work undertaken as well as the main policy research findings and recommendations. This report will be presented to MEF's senior management and other interested parties.

III. TECHNICAL ASSISTANCE REQUIREMENTS, ROLES AND RESPONSIBILITIES

To undertake this work, UNDP is seeking to hire the services of a team of international experts that can provide specialized technical assistance in the field of economywide/system modelling for the SDGs. This team is expected to have expertise in SDG-specific economywide/systems modelling, as well as a track record of working in this type of assignments, which combines both policy research and capacity development elements, with governments in other developing countries.

The contractor(s) selected for this assignment will make available its services and its internal expertise and capacities to undertake the following tasks:

1. In consultation with the Department for Economic and Development Policy (DPED, in its Portuguese abbreviation) at the Ministry of Economy and Finance and UNDP, outline a detailed policy research and capacity development programme specific for this assignment.
2. Implement the training and capacity development component of this modelling exercise.
3. Assist the DPED/MEF to outline modelling scenarios that respond to the purpose of the assignment.
4. Make changes to the modelling framework that might be necessary to run the modelling scenarios defined for this assignment.
5. To the extent possible, and in close consultation and with support from national partners taking part in this assignment, calibrate the model with the latest data for Mozambique that might be available at the time of the assignment.
6. Provide technical assistance in running modelling scenarios that respond the overall objective define for this modeling exercise.
7. Together with participants of this modelling and capacity development initiative, produce a report outlining the main elements of the policy research undertaken and presenting key research findings and policy recommendations.

The Ministry of Economy and Finance, through its Department for Economic and Development Policy (DPED), will be the host and main institutional counterpart for this assignment. As such, it will provide overall guidance on the substantive focus of this exercise, the issues to be addressed and possible modelling scenarios. It will also help convene other relevant national partners that may be involved and take part in this modelling and capacity development exercise.

UNDP, on the other hand, will provide management and technical support to this exercise. In this regard, it will be responsible, among other things, for overall project management of work to be done for this assignment and will take care of all contractual matters with the team of international experts hired to lead on this exercise. In addition, UNDP will also participate in the various modelling and capacity development activities envisaged for this assignment.

IV. DELIVERABLES AND PAYMENT SCHEDULE

The team of international experts hired to lead on this modelling exercise will be responsible for producing the following deliverables:

- I. An **Inception Report** presenting how they intend to undertake this assignment, and which includes a detailed policy research and capacity development programme for this work.
- II. A series of **training and modelling sessions**, as per the general parameters provided in this ToRs. The specific, format, timing and nature of these sessions will be specified by the contractor in the technical proposal submitted to this RFP and, at a later stage, in the initial inception report.
- III. A **policy research report** to be produced at the end of the assignment outlining the main elements of the policy research undertaken and presenting key research findings and policy recommendations.

On the basis of the above deliverables, payments for this assignment will be made in four (4) separate tranches, as per the following payment schedule:

- A first payment, equivalent to 30% of the total contract amount, to be made upon submission and validation of the Inception Report.
- A second payment, equivalent to 40% of the contract amount, to be made upon completion of all training and modelling sessions envisaged in stages 1 and 2 outlined in section II of the present ToRs.
- A fourth payment, equivalent to 20% of the contract amount, to be made upon submission and validation of as first draft of the policy research report to be produced for this assignment.
- A fifth and final payment, equivalent to 10% of the contract amount, to be made upon submission and validation of a final draft of the policy research report to be produced for this assignment.

VII. PROFILE AND EXPERIENCE OF CONTRACTOR

The international experts hired to lead on this SDG modelling assignment should have the following profile and professional experience:

- A master's degree or equivalent in economics or other fields relevant to the assignment. A PhD degree would be an asset.

- Proven expertise in economywide or systems modelling. Specific experience applying these modelling approaches to the analysis of the SDGs would be desirable.
- Proven experience undertaking similar policy modelling assignments involving both policy research and capacity development components for governments and/or international organizations.
- Experience working in similar type of country contexts to that of Mozambique would be an asset.
- Ability to produce high quality policy papers and technical reports.
- A track record of publications and related materials on relevant development policy related matters and demonstrated ability to promote and inform national policy debates through outreach and advocacy efforts and the organization of policy dialogue events.
- Full proficiency in English. Knowledge of Portuguese would be an asset.

VIII. TECHNICAL AND FINANCIAL PROPOSAL

This RFP is open to joint proposals by individual consultants, research institutes, policy think tanks, academic institutions or consultancy firms. Interested bidders should submit a technical and financial proposal in response to this RFP.

Technical Proposal

The technical proposal should present in a sucking manner the team of experts and indicate in detail how the work will be carried out. In doing so, the technical proposal should demonstrate the relevance of the proposed approach to the ToRs defined for this assignment, as well as a clear understanding of how project deliverables and project results will be attained.

The proposal should be organized according to the following outline:

- I. Cover Page: the cover page should include the title of the assignment, the names of the offeror (if an organization) and of the members of the team of experts, as well as contact information.
- II. Executive Summary: A maximum two-page executive summary clearly stating the offeror's understanding of the assignment and a proposed strategy to undertake this work. This should include an outline of the proposed methodology, management approach, implementation plan and expected results.
- III. Background and profile: The offeror should introduce in this section its organization and/or the team of experts. It should highlight those capacities, partnerships and areas of expertise that are of relevance for the assignment and include a list of relevant projects undertaken by the offeror during at least the previous five (5) years.
- IV. Technical Approach: This section should describe the proposed technical approach to be followed in undertaking the assignment, based on the information presented in the present ToRs, as well as on the offeror's experience undertaking similar type of project. In doing so, the proposal should:
 - Address how the offeror will achieve the objectives outlined in the ToR and provide a concise description of the approach, both to the modelling as well as to the capacity development component envisaged for this assignment.
 - Outline a tentative workplan for the implementation of the assignment, with timelines, dates and corresponding deliverables.

- Present a detailed programme for both the capacity development and modelling components of the assignment.
 - Include, if any, particular approaches, methods, or techniques that the offeror proposes to use for efficiently and innovatively delivering this scope of work and expected support for UNDP.
- V. Team members: Include a list of the core project team of experts with their corresponding CVs, as well as their roles and responsibilities clearly outlined.
- VI. Management arrangements: The offeror must provide a brief and clear description of how the activity will be managed, including the approach to addressing potential problems and process for communication with UNDP and MEF/DPED.
- VII. A duly filled and signed Letter of Confirmation of Interest and Availability, using the template provided by UNDP.

Financial Proposal

The offeror shall submit a summary financial proposal, accompanied by a more detailed breakdown of costs. The following minimum cost breakdown should be provided: salary and wages with details of time commitment, travel, transportation, equipment and supplies, training, overhead, and any other indirect or direct costs. The budget shall be supported with sufficiently detailed information, in order to allow a complete analysis of costs. A short budget narrative must also be included, providing details of the cost element, as well as the basis of estimate for each budget line item. The offeror must propose costs that are realistic and reasonable and propose an efficient and effective budget to achieve the project objectives and targets.

IX. EVALUATION METHODOLOGY AND CRITERIA

Methodology

The evaluation is based on a qualification (pass/fail) assessment to determine whether proposals meet the eligibility and qualification criteria described in the evaluation criteria table below. Proposals determined to meet the eligibility and the qualification criteria shall then be considered for the next stage. Proposals not meeting the qualification criteria shall be rejected.

The selection process will follow on a weighted technical and financial evaluation procedure where:

- The Technical Criteria weights 70%; and
- The Financial Criteria weights 30%

The Selection of bidders will be based on a combined technical and financial. Only offers with a technical score equal or exceeding 49 points, equivalent to 70% of the total 70 points possible for the technical evaluation, will be considered for the financial evaluation.

The final score shall be calculated as follows:

Final Score (NG) = (Nt x T %) + (Nf x F %)

The contract will be awarded to the firm scoring the highest score.

Evaluation criteria table Technical evaluation criteria	Points
Overall experience of bidder in undertaking similar work	10
Understanding of the assignment and of its intended objectives and expected results, and reflection of this in proposed programme/workplan to undertake this work	15
Suitability of modelling approach, modelling framework and modelling tools being proposed, in terms of addressing the issues to be examined in the assignment and contributing to its intended capacity development goals	15
Adequacy of capacity development approach of the proposal	10
Qualification of team of experts proposed for the assignment	20
Description of the offeror's cost effectiveness and cost efficiency, including substantiation of the proposed budget, reasonableness of requested items and amounts, evidence of quality of financial and organizational management	30
Total	100

X. APPLICATION PROCEDURE

The application should be done by e-mail and submitted to the following email address bidsubmission.mz@undp.org

Signature and approval of the ToRs:



Alex Warren-Rodríguez

UNDP Senior Economist
03-Mar-2021

Date: _____



Francisco Roquete

UNDP Deputy-Representative
04-Mar-2021

Date: _____