

UNEP JUNIOR PROFESSIONAL OFFICER REQUEST

General Information

Post Title: Junior Professional Officer, System Dynamics Modeler

Office/Division/MEA: Early Warning & Assessment Division

Unit: Early Warning and Data Analytics Branch/System Analysis and Foresight Briefs Unit

Location: Nairobi

Duration: 2 years

Background information on the UNEP and the requesting Unit

The United Nations Environment Programme is the leading global environmental authority that sets the global environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations (UN) system and serves as an authoritative advocate for the global environment.

The Early Warning & Assessment Division provides timely, scientifically credible, policy-relevant environmental analyses, data and information for decision-making and action planning for sustainable development. It monitors, analyzes and reports on the state of the global environment, assesses global and regional environmental trends and provides early warning of emerging environmental threats.

The JPO will support UNEP's System Analysis and Foresight Unit in the Early Warning and Data Analytics Branch of the Early Warning & Assessment Division in undertaking environmental modelling work.

Why is the Junior Professional Officer requested/needed?

The Junior Professional Officer will work on the Climate Related Security Risk Simulator demonstration modelling assignment that builds upon the data, information and indicators made available through the World Environmental Situation Room and other similar platforms.

The System Dynamics Modeler will be responsible for developing, implementing, and maintaining complex mathematical based models to simulate and analyze complex environmental systems.

As part of the horizon-scanning and foresight process, the modeler will also contribute to tracking emerging environmental and human health risks, bringing these to the attention of governments to prioritize research informed by large-scale systematic analysis for policy making.

The identification and communication of emerging issues to policymakers is a process at the heart of the science-policy interface. Global, regional and national policymaking is

facilitated by environmental information made available through foresight and strategic methods as well as by the systematic review and evidence-based analysis of emerging issues to inform decision-making.

Supervision

The JPO will work under the direct supervision of:

Title supervisor: Head of Unit

Unit supervisor: System Analysis and Foresight Briefs Unit

Location supervisor: Nairobi, Kenya

The JPO and Supervisors will use Inspira, the UN Secretariat platform for online ePerformance, to structure the timing and methodology of feedback and tracking of performance. The performance evaluations will be made available to the donor Government.

Content and methodology of the supervision:

The System Analysis and Foresight Briefs Unit and in particular the supervisor will provide high-quality supervision, guidance and mentoring to the Junior Professional Officer including the following elements:

- The Supervisor will brief the Junior Professional Officer on arrival, as well as carry out introductions to the Early Warning & Assessment Division and UNEP colleagues.
- Relevant internal induction documents will be provided to enable the Junior Professional Officer to explore and learn elements of UNEP's work;
- The Junior Professional Officer will be invited to weekly coordination meetings in the System Analysis and Foresight Briefs Unit and Early Warning and Data Analytics Branch and the periodic Early Warning & Assessment Division Meetings.
- Work plans for the Junior Professional Officer will be discussed in the context of the Objectives and Expectations of the Office's priority areas. The style of supervision will be inclusive and involve daily consultations and regular feedback on the progress of work assigned both individually and with the relevant Programme Teams.
- The Junior Professional Officer and Supervisors will use INSPIRA, the UN Secretariat platform for online ePerformance, to structure the timing and methodology of feedback and tracking of performance;
Feedback on the execution of activities will be provided about the delivery of agreed outputs in the work plan.

First appraising officer: Mr. Sandor Frigyik
Title first appraising officer: Head of Unit
Unit first appraising officer: System Analysis and Foresight Briefs Unit
Location first appraising officer: Nairobi

Second appraising officer: Mr. Alexander Caldas
Title second appraising officer: Chief of Branch
Unit second appraising officer: Early Warning and Data Analytics Branch
Location second appraising officer: Nairobi

Duties, responsibilities and output expectations

Terms of reference

- Develop, test and calibrate fully functional System Dynamics models with suitable online user interfaces.
- Facilitate group model building workshops
- Prepare accompanying reports with a full explanation of models, including causal loop diagrams appropriate validation, testing and applicability and proposals for further development and boundary expansion.
- Prepare presentations, with PowerPoint presentation slides, for explaining and promoting the models to interested internal parties with proposals for integrating the models with existing initiatives to generate synergies
- Provide a guideline with timelines for future reviews and evaluation of the models for further adaptation and assessment of applicability as intended.
- Assist in developing Foresight Briefs.
- Performing other related duties as requested

Output expectations

The outputs generated from this assignment are expected to contribute to policy insights based on higher-level system analyses of environmental data. In particular:

- Developed, tested and fully calibrated functional System Dynamics models focused on environmental issues with suitable online user interfaces.
- Produce reports with full explanations of models, including causal loop diagrams appropriate validation, testing and applicability and proposals for further development and boundary expansion.
- Presentations on demonstration models, with power-point presentation slides, for explaining and promoting the models to interested internal parties with proposals for integrating the models with existing initiatives to generate synergies.

- Assist with the development of Foresight Briefs, demonstrating where possible the practical application of scenario generation from data-based causal modeling.
- Develop guidelines with timelines for review and evaluation of the models for further adaptation and assessment of applicability as intended.

Travel

The Junior Professional Officer will undertake 1-3 estimated missions per year related to the Terms of Reference.

Missions and costs of travel envisaged during first year of assignment:

1 mission at an estimated total cost of \$6,000 (these will be funded out of the JPO travel budget provided by the donor government and supplemented by travel funds within the project).

Missions and costs of travel envisaged during the second year of assignment:

1 mission at an estimated total cost of \$6,000 (these will be funded out of the JPO travel budget provided by the donor government and supplemented by travel funds within the project).

Missions and costs of travel envisaged during the third year of assignment (if applicable):

1 mission at an estimated total cost of \$6,000 (these will be funded out of the JPO travel budget provided by the donor government and supplemented by travel funds within the project). (if applicable)

Missions will be set in line with UNEP travel guidelines.

Training and Learning Elements

The Junior Professional Officer will be offered the opportunity to undertake the following training courses:

- The Junior Professional Officer will be offered opportunities to participate in UNEP's project management training and undertake relevant training programmes organized by the UN system
- UNEP's online training programmes: the Junior Professional Officer will be provided the opportunity to undertake a variety of programmes provided by UNEP.
- On the job training: the supervisors of the Junior Professional Officer are committed to providing daily on-the-job training for the Junior Professional Officer's effective operation in the UN system.
- Specialized training will be agreed in consultation with the supervisor.

Learning elements:

After one year the Junior Professional Officer is:

- Able to apply knowledge of the UN system and the role of the UNEP within the UN system. Understand UNEP's programmatic and operational structures and related rules and regulations.
- Able to analyze and draft reports, technical papers and background documents to support UNEP's work.

After two years the Junior Professional Officer:

- Has strengthened expertise and skills acquired in Year One.
- Appreciates challenges and opportunities for the implementation of UNEP's work related to the System Analysis and Foresight Briefs Unit.
- Applies skills gained to plan future career development in international environment affairs, assessment and/or statistics either in government agencies, international agencies, the UN, non-governmental organizations, research institutes or the private sector.
- Has improved understanding of the gender-environment nexus

After three years (if applicable), the JPO:

- Has strengthened expertise and skills acquired in Year One and Two.

Training and Learning Elements:

After one year the Junior Professional Officer can: Develop relevant environmental System Dynamics models suitable for presentation to policy makers. Assess project proposals, and draft project budgets according to UN standards. monitor progress in solving problems, and formulate remedial action proposals. Develop knowledge of the UN system, contacts in and outside the UN system, understanding multicultural work-environment, familiarity with rules and regulations, improved negotiating skills, improved editing/writing/reporting, and organizational/evaluation skills.

After two years the Junior Professional Officer can be fully compliant in developing environmental System Dynamics models suitable for presentation to policymakers. Assess project proposals, and draft project budgets according to UN standards. monitor progress in solving problems and formulate remedial action proposals. Develop further knowledge of the UN system, contacts in and outside the UN system, understanding multicultural work-environment, familiarity with rules and regulations, improved negotiating skills, improved editing/writing/reporting, organizational/evaluation skills.

After three years (if applicable) the Junior Professional Officer can: Consolidate experience gained from the first 2 years.

Qualifications and experience

Qualifications

Advanced university degree (master's degree or equivalent) in System Dynamics modelling, or similar causal simulation modeling, or a related subject is required. A first-level university degree in combination with four years of qualifying experience may be accepted in lieu of the advanced university degree.

Skills:

Language(s) proficiency required: Fluency in English is essential. Working knowledge of other UN languages is an asset.

Working knowledge of System Dynamics or similar causal simulation modelling as applied to socio-economic or socio-environment problems.

Knowledge and appreciation of issues relating to sustainable development including a sound understanding of its economic and social aspects and issues related to indigenous peoples and local communities in the environmental context.

Knowledge of foresight and horizon scanning is beneficial.

Working experience

A minimum of 4 years of progressively responsible work experience in project/programme management in System Dynamics modelling and research sector or development is required; Experience in model building and facilitation is required.

Competencies:

PROFESSIONALISM: Shows pride in work and achievements. Demonstrates professional competence and mastery of subject matter. Is conscientious and efficient in meeting commitments, observing deadlines and achieving results. Is motivated by professional rather than personal concerns. Shows persistence when faced with difficult problems or challenges. Remains calm in stressful situations

PLANNING AND ORGANIZING: Develop clear goals that are consistent with agreed strategies. Identifies priority activities and assignments; adjusts priorities as required. Allocates appropriate amount of time and resources for completing work. Foresees risks and allows for contingencies when planning. Monitors and adjusts plans and actions as necessary. Uses time efficiently.

COMMUNICATION: Speaks and writes clearly and effectively. Listens to others, correctly interprets messages from others and responds appropriately. Asks questions to clarify, and exhibits interest in having two-way communication. Tailors language, tone, style and format to match the audience. Demonstrates openness in sharing information and keeping people informed.

COLLABORATION AND TEAMWORK: Works collaboratively with colleagues to achieve organizational goals. Solicits input by genuinely valuing others' ideas and expertise; is willing to learn from others. Places team agenda before personal agenda. Supports and acts by final group decision, even when such decisions may not entirely reflect own position. Shares credit for team accomplishments and accepts joint responsibility for team shortcomings. Collaboration and teamwork

Living conditions at duty station

Nairobi: Normal living conditions for a developing country in Africa.