

**INTERNATIONAL ATOMIC ENERGY AGENCY**

**TECHNICAL CO-OPERATION & ASSISTANCE PROGRAMME**

**EXPERT REQUEST FORM**

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| Project Code:  | IRA/2/016  |
| Project Title:  | Action Plan for implementation of Workplan activities in 2022-2023 |
| Title of Mission:  | Advanced Training Support on ESTE SW |
| Number of Expert/s:  | 2 or 3 |
| Field of Expertise:  | 1. ESTE software.
2. algorithms, criteria, relationships, various modules of the ESTE software.
3. principles and basics of meteorological and atmospheric phenomena.
4. principles and basics of ArcGIS.
5. principles and basics of radioactive material dispersion modelling at atmosphere and hydrosphere.
6. radiation protection and dose assessment.
7. radiological impacts of Emergency situations.
8. decision making in radiological Emergency situations.
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| Duty Station Contact person: (specify address, phone, E-mail):  | Hassan RostamiBNPP Environmental Monitoring Laboratory Next to Municipality Bus parking- Niroughah Highway-Azadi Square- Bushehr- Iran I.R.+989126942124BNPP, rostami@nppd.co.ir |
| Duration of mission: (date) | At least 15 working days (three calendar weeks ) |
| When required (specify year and month):  |  1’st or 2’nd quarter 2023 |
| Duties:  | 1. General introduction of the SW **ESTE Annual Impacts (ESTE AI) and ESTE Bushehr (ESTE BNPP)** as was delivered to Iran.
2. Conceptual model, exposure pathways, Representative person – definition **(ESTE AI)**.
3. Dispersion model for airborne discharges. Dispersion model for marine environment (liquid discharges) **(ESTE AI)**.
4. Input data inevitable to make calculations of impacts: Content and format of data. **(ESTE AI)**.
5. Libraries of conversion factors, transfer factors and other parameters of the SW. **(ESTE AI)**.
6. How to modify or update libraries **(ESTE AI)**.
7. How to modify or update map layers and inventories **(ESTE AI & ESTE BNPP)**.
8. Description of the GUI (graphical user interface), working with maps, tables, graphs, how to switch English/Russian language version, how to use archive, etc., overview of GUI functions available. **(ESTE BNPP)**
9. Conceptual model, how does the program run, what are the most important algorithms applied, from symptoms of initiating event up to urgent protective measures recommended. **(ESTE BNPP)**
10. Initiating events are considered. Symptoms of release pathways considered. Symptoms of the state of the core/state of spent fuel pool considered. Symptoms of the state of containment considered. **(ESTE BNPP)**
11. Database of pre-calculated predicted source terms implemented in the program. How is pre-calculated source term assimilated to really observed symptoms and conditions. **(ESTE BNPP)**
12. Models for radiological impacts. Dispersion models implemented – description, input data. Ingestion models implemented. How are specific intervention levels for specific urgent protective measures evaluated. **(ESTE BNPP)**
13. Description of meteorological data applied. How to use the SW in simulation (scenario) mode. **(ESTE BNPP)**
14. How to develop and edit the Scenarios. **(ESTE BNPP).**
15. Practical training and play roles as crisis staff members and use SW “ESTE Bushehr” as decision support system. **(ESTE BNPP).**
16. How to verify **ESTE AI & ESTE BNPP** output data.
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| Qualification of experts: | 1. Professional and complete mastery of radioactive material dispersion modelling in the atmosphere and hydrosphere/ spatial information processing software (GIS)/ principles and concepts of meteorology
2. Expert in radiation protection and dose assessment.
3. Expert in radiological impacts of Emergency situations.
4. Expert in decision making in radiological Emergency situations.
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| Acceptable working language of expert :  | English |
| **If specific expert is suggested, please indicate the name and address. This does not mean that the expert will be automatically considered for the mission**.  |
| Name: Telephone: E-mail: Address:  |   |
| Background Information: (Justification for the request of the expert mission e.g. To support national project, IAEA project)  |  |