ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 1 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Safety Assessment of Radioactive Waste generated for operation of NPP |
| 2) | What is behind above need | To acquire methods of Safety Assessment of radioactive waste |
| 3) | Field | A. Radioactive Waste Management |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 2 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Radioactive Waste treatment |
| 2) | What is behind above need | To acquire knowledge on radioactive waste treatment |
| 3) | Field | A. Radioactive Waste Management |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 3 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Near Surface disposal facilities |
| 2) | What is behind above need | To acquire knowledge for the Development of near surface disposal facilities |
| 3) | Field | A. Radioactive Waste Management |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 4 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Development of environmental radiation monitoring facilities around nuclear installation |
| 2) | What is behind above need | To acquire knowledge on development of environmental radiation monitoring around nuclear facility. |
| 3) | Field | B. Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad & Invite foreign expert |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 5 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Groundwater Modeling and Age determination |
| 2) | What is behind above need | To acquire knowledge on groundwater modeling, particle transport and simulation of groundwater |
| 3) | Field | B. Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad & Invite foreign expert |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 6 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Neutron Beam Application (Neutron Activation) |
| 2) | What is behind above need | To acquire knowledge in the field of reactor based neutron activation analysis and to train up the young scientists for the development of sustainable human resource in the field of neutron activation analysis |
| 3) | Field | B. Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad & Invite foreign expert |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 7 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Agricultural Application of RI |
| 2) | What is behind above need | To train up manpower on the preparation, characterization and application of oligosaccharide (Chitosan, Alginate etc.) as plant growth promoter.<br>To train up manpower on the synthesis and characterization of super water absorbent for the application of soil conditioning |
| 3) | Field | B. Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad & Invite foreign expert |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 8 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Radiation Treatment |
| 2) | What is behind above need | Nuclear oncology Specially Therapeutic use of radiolabelled antibodies |
| 3) | Field | B. Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad & Invite foreign expert |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 9 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Development of DNA markers to determine and improve the efficiency of radiation-induced plant in mutation breeding |
| 2) | What is behind above need | To acquire knowledge on Development of DNA markers to determine and improve the efficiency of radiation-induced plants in mutation breeding. |
| 3) | Field | B. Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad & Invite foreign expert |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 10 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Screening and identification of toxic element in foods using nuclear and chromatographic techniques |
| 2) | What is behind above need | To acquire knowledge Nuclear and chromatographic techniques used for identification of toxic elements in foods. |
| 3) | Field | B. Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad & Invite foreign expert |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 11 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Insect pest control using nuclear technique (SIT) |
| 2) | What is behind above need | To acquire knowledge on latest Sterile insect Technique (SIT) for pest control. |
| 3) | Field | B. Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad & Invite foreign expert |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 12 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | LOCA analysis using RELAP5 |
| 2) | What is behind above need | |
| 3) | Field | C. Research Reactor |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 13 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Research Reactor Experiment |
| 2) | What is behind above need | Criticality test, Measurement of reactor neutronic parameters using self-powered neutron detector (SPND), etc. |
| 3) | Field | C. Research Reactor |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 14 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Ageing Management of the Research Reactor |
| 2) | What is behind above need | Training on life assessment of reactor core internals and implementation of systematic ageing management program for research reactor |
| 3) | Field | C. Research Reactor |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 15 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | In-service Inspection of the Research Reactor |
| 2) | What is behind above need | Training on Vibration analysis of rotating machineries of reactor cooling systems and ultrasonic testing equipment for inspection of reactor tank thickness and flow. |
| 3) | Field | C. Research Reactor |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 16 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Emergency Preparedness & Response |
| 2) | What is behind above need | To acquire knowledge on various aspects of emergency preparedness and response;<br>-IAEA Guidelines and International Nuclear Event Scale (INES)<br>-Appreciation of preparedness and response function.<br>-Local emergency preparedness and response team organization.<br>-Generic Intervention Levels.<br>-Generic Action Levels.<br>-Emergency Worker Guidelines/Guidance.<br>-Operational Intervention Levels.<br>-Urgent Protective Action.<br>-Emergency Management & Decision making techniques.<br>-Technical preparedness and response. |
| 3) | Field | F. Nuclear/Radiation Safety |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 17 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Radiation instrumentation in nuclear power plant |
| 2) | What is behind above need | Radiation safety, area monitoring, area classification, emergency plan and preparedness |
| 3) | Field | F. Nuclear/Radiation Safety |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 18 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Application and standards of Radiation Protection |
| 2) | What is behind above need | Application and standards of Radiation Protection |
| 3) | Field | F. Nuclear/Radiation Safety |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad & Invite foreign expert |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 19 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Dispersion through air, water, etc. and calculation of down wind dose Lecture |
| 2) | What is behind above need | |
| 3) | Field | F. Nuclear/Radiation Safety |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 20 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Nuclear Risk management/communication |
| 2) | What is behind above need | To acquire knowledge and skills on nuclear risk management/communication for supporting staff. |
| 3) | Field | G. Policy/Planning/Administration |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 21 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Nonproliferation and safeguards |
| 2) | What is behind above need | To acquire knowledge and skill on nonproliferation and safeguards. |
| 3) | Field | G. Policy/Planning/Administration |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 22 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Nuclear Project Management and Monitoring for Supporting Staff |
| 2) | What is behind above need | To acquire knowledge and skills on Nuclear Project Management and Monitoring. |
| 3) | Field | G. Policy/Planning/Administration |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 23 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Ion beam application for environmental studies and nuclear reaction studies |
| 2) | What is behind above need | To acquire knowledge on elemental analysis in environmental samples and on charge particles induced nuclear reactions. |
| 3) | Field | H. Others |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad & Invite foreign expert |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 24 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Dense Plasma Focus Device: Production, Diagnosis and Modeling |
| 2) | What is behind above need | To acquire knowledge on Production, Diagnosis and Modeling of the plasma in dense plasma focus device |
| 3) | Field | H. Others |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad & Invite foreign expert |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Bangladesh-

| No. | | 25 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Development of Instrumental Facilities for Radiation Area Monitoring around NPP |
| 2) | What is behind above need | Develop of comprehensive understanding on the instrumentation & control (I & S) system of NPP |
| 3) | Field | H. Others |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad & Invite foreign expert |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture, Practice, Facility Visit, etc. |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from China-

| No. | | 1 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | 1.Safety anlaysis of internal flooding and high energy pipe break.<br>2.Water volume caculation method.<br>3.Cacultion method for defining jet cones and jet impingement induced by high energy pipe break. |
| 2) | What is behind above need | These method can be used internal hazard safety analysis for ensuring the equipment needed for the main safety functions shall be protected against unacceptable effects of internal flooding and high energy pipe break. |
| 3) | Field | E. Fuel/Material |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Invite foreign expert |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | 2~3days training |
| 8) | Eligible person (background, career, etc.) | Hazard safety analysis engineer, experience in internal flooding,high energy pipe break safety analysis. 1person |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from China-

| No. | | 2 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Opearting technical specifications |
| 2) | What is behind above need | Objectives to master the design of  opearting technical specifications |
| 3) | Field | E. Fuel/Material |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Invite foreign expert |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | 2~3days training |
| 8) | Eligible person (background, career, etc.) | 10 Engineers  worked for operating techniccal specification. |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from China-

| No. | | 3 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | The deposition and transfer of the corrosion products in the radioactive systems in PWR |
| 2) | What is behind above need | Know how to calaculate the radioactive activities of the crossion products in the water and deposited on the surface in PWR |
| 3) | Field | D. Nuclear Power Reactor |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Invite foreign expert |
| 6) | Priority (High/Medium/Low) | Low |
| 7) | Preferable method and duration | 1 week training |
| 8) | Eligible person (background, career, etc.) | ten trainnees, about 5 years experiences in radiation protection |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from China-

| No. | | 4 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Radwaste treatment post severe accident, including the source terms, treatment methods/processes |
| 2) | What is behind above need | Analysis the usability of current radwaste treatment system in the conditions of post-accident; Identify typical nuclides need to be removed and the relevant treatment process; Know how to compose a proper treatment system. |
| 3) | Field | A. Radioactive Waste Management |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Invite foreign expert |
| 6) | Priority (High/Medium/Low) | Low |
| 7) | Preferable method and duration | one-week training |
| 8) | Eligible person (background, career, etc.) | 8 trainees, approx. 5 years experiences in design of the radwaste treatment system |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from China-

| No. | | 5 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Building Design and Project Engineering Management of Proton Therapy System |
| 2) | What is behind above need | Being a nuclear project design company, CNPDC is devoting to the building design and engineering management of such as Proton Therapy Hospital etc. RI application health care projects now. But it is still a new field in China. So I want to grasp the key points and specified resarches through the training. |
| 3) | Field | B. Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Invite foreign expert |
| 6) | Priority (High/Medium/Low) | Low |
| 7) | Preferable method and duration | 1 or 2 weeks training in specified fields, such as facility, aligment, radiation protection and auxiliary systems requirement. |
| 8) | Eligible person (background, career, etc.) | Engineering management, civil works (architecture, civil structure ) , radiation safety, HVAC, the other pfofessions( air, water, electric, instrument control etc.) , all amount 8 trainees |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Indonesia-

| No. | | 1 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Site development plan |
| 2) | What is behind above need | Indonesia is planning to construct and operate an experimental power reactor (EPR) as an effort to fulfill the mandate of the Law No. 17 for the 3rd Medium-Term Development Plan (2015-2019).<br>The program to build and operate an experimental power reactor in Indonesia is expected to yield significant benefits for the society. The EPR can accelerate the development of nuclear technology in Indonesia. Applications from the EPR will give added value to the existing local natural resources, hence serve as a mockup to meet supply of raw materials for industry that currently relies on imports. National achievement in the deployment, operation and maintenance as well as utilization of the experimental power reactor will enhance public acceptance for nuclear technology in order to fulfil one of the State's obligations to ensure the prosperity of its citizens. Environmental sustainability and improved quality of life and national income from local mineral processing sector are the necessity impact of safe utilization (safety, security and safeguard) of nuclear technology, therefore gaining trust from the international community in national mastery of advanced technology.<br>Siting is an important aspect prior to the construction and operation of the EPR. After foing site evaluation, site development plan has to be done to make the site ready for construction. This training course is aimed for capacity building of personnel related to site evaluation and site preparation act |
| 3) | Field | D. Nuclear Power Reactor |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go Abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Training/Workshop (3 – 4 weeks) |
| 8) | Eligible person (background, career, etc.) | Officers who takes charge of siting. University degree with familirity of siting process |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Indonesia-

| No. | | 2 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Design of cogeneration system coupled with a small power HTR |
| 2) | What is behind above need | Indonesia is planning to construct and operate an experimental power reactor (EPR) as an effort to fulfill the mandate of the Law No. 17 for the 3rd Medium-Term Development Plan (2015-2019).<br>The program to build and operate an experimental power reactor in Indonesia is expected to yield significant benefits for the society. The EPR can accelerate the development of nuclear technology in Indonesia. Applications from the EPR will give added value to the existing local natural resources, hence serve as a mockup to meet supply of raw materials for industry that currently relies on imports. National achievement in the deployment, operation and maintenance as well as utilization of the experimental power reactor will enhance public acceptance for nuclear technology in order to fulfil one of the State's obligations to ensure the prosperity of its citizens. Environmental sustainability and improved quality of life and national income from local mineral processing sector are the necessity impact of safe utilization (safety, security and safeguard) of nuclear technology, therefore gaining trust from the international community in national mastery of advanced technology.<br>The EPR is also intended to be used to explore possibility of heat utilization for industrial process in a framework of cogeneration system. The training is necessary to enhance human resource development to develop design and engineering of cogeneration system, such as hydrogen pro |
| 3) | Field | D. Nuclear Power Reactor |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go Abroad |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | Training/Workshop (2 – 3 weeks) |
| 8) | Eligible person (background, career, etc.) | Officers or researchers related to utilization of nuclear energy. University degree |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Indonesia-

| No. | | 3 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Implementation of aging management on Interim Storage for Spent Fuel |
| 2) | What is behind above need | To acquire knowledge on impelemtation of aging management on Interim Storage for Spent Fuel |
| 3) | Field | A. Radioactive Waste Management |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go Abroad |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | OJT (1 – 2 months) |
| 8) | Eligible person (background, career, etc.) | Scientists or engineers of Radioactive Waste Management |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Indonesia-

| No. | | 4 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Radioactive waste management generated from decontamination and decommissioning activity. |
| 2) | What is behind above need | To acquire knowledge on development of radioactive waste management generated from decontamination and decommissioning activity |
| 3) | Field | A. Radioactive Waste Management |
| 4) | Level (Advanced/Medium/Basic) | Advenced |
| 5) | Go to abroad/Invite foreign expert | Go Abroad |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | OJT (1 – 2 months) |
| 8) | Eligible person (background, career, etc.) | Scientists or engineers of Radioactive Waste Management |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Indonesia-

| No. | | 5 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Development of radioactive waste management information system |
| 2) | What is behind above need | To acquire knowledge on development of radioactive waste management information system |
| 3) | Field | A. Radioactive Waste Management |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go Abroad |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | OJT (1 – 2 months) |
| 8) | Eligible person (background, career, etc.) | Scientists or engineers of Radioactive Waste Management |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Indonesia-

| No. | | 6 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Safety assessment, engineering, safety engineering, reactor behaviour, reactor physics, water chemistry, instrumentation, decommisioning, fuel material |
| 2) | What is behind above need | Enhancing knowledge and ecperience for reactor workforces |
| 3) | Field | C. Research Reactor |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go Abroad |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | OJT (1 – 2 months) |
| 8) | Eligible person (background, career, etc.) | Research Reactor Operator |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Kazakhstan-

| No. | | 1 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Planning, social policy and management in the field of nuclear power production development and nuclear technologies promotion |
| 2) | What is behind above need | Our country during recent 7 years is announcing the determination to construct nuclear power plant. The process appeared to be durable due to poor planning and management. The same with transferring of nuclear technologies into broad application. Specialists with good abilities in the field of planning, social policy and management in the field of nuclear power production development and nuclear technologies promotion are highly demanded in our country. We have no much experience in training specialists on sufficiently high level. We would like to get acquainted with such experience of other countries which are success in this field. |
| 3) | Field | G. Policy/Planning/Administration |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Invite foreign expert |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | 2-4 weeks, seminar |
| 8) | Eligible person (background, career, etc.) | governmental officers, administrative workers |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Kazakhstan-

| No. | | 2 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Radiation technologies application for agriculture and their promoting |
| 2) | What is behind above need | The policy of our country is determined to transfer economy on innovative technologies and radiation technologies are among the most important. Unfortunately we have very few specialists in the field of radiation technologies for agriculture application. We need international experience in the field of radiation technologies application for agriculture and their promoting |
| 3) | Field | B. Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | 3-6 months, lectures, practical work |
| 8) | Eligible person (background, career, etc.) | master of engineering, PhD |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Kazakhstan-

| No. | | 3 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Liquid radioactive waste treatment |
| 2) | What is behind above need | There were two testing sites for nuclear weapon in Kazakhstan and we had breeding power reactor BN-350 which is on decommission now. Therefore the problem of radiation waste management is very important for us. We need advanced experience in the field of liquid radioactive waste treatment and other aspects of the problem. |
| 3) | Field | A. Radioactive Waste Management |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | 3-6 months, lectures, practical work |
| 8) | Eligible person (background, career, etc.) | master of engineering, PhD |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Kazakhstan-

| No. | | 4 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Reactor material science and fuel cycle |
| 2) | What is behind above need | Kazakhstan possesses by rich uranium and metallic ore resources. Our republic is planning diversification raw economy to the economy based on metallurgy of advanced processing/ Therefore we need specialists in the field of reactor material science and fuel cycle. |
| 3) | Field | E. Fuel/Material |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | 3-6 months, lectures, practical work |
| 8) | Eligible person (background, career, etc.) | master, PhD |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Kazakhstan-

| No. | | 5 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Nuclear and radiation safety |
| 2) | What is behind above need | Nuclear and radiation safety is one of the most important issue nowadays. The degree of people trust and positive attitude to the nuclear power development strongly depend on the degree of its safety and reliability. To provide sufficiently high level degree of safety we need skilled specialists who had seized advanced experience in this field. |
| 3) | Field | F. Nuclear/Radiation Safety |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | 3-6 months, lectures, practical work |
| 8) | Eligible person (background, career, etc.) | master |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Korea-

| No. | | 1 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | nuclear general information |
| 2) | What is behind above need | After Fukusima accidents, people in our country have doubt of current nuclear activities. It is needed for the educators of FNCA contries to design, deveoplement and operation of proper education programs, sharing common and objective information among FNCA countries |
| 3) | Field | F. Nuclear/Radiation Safety |
| 4) | Level (Advanced/Medium/Basic) | Basic |
| 5) | Go to abroad/Invite foreign expert | invite foreign expert |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Invited middle or high shool students on short days |
| 8) | Eligible person (background, career, etc.) | the general people who are not familiar with nuclear energy |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Malaysia-

| No. | | 1 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Nuclear Public Information and Public Awareness (PIPA) |
| 2) | What is behind above need | Malaysia is considering to embark on nuclear power programme for the future electricity generation. Therefore, there is a need to develop a national programme for PIPA, so that interaction between the nuclear industry and the public will be in favour for the government decision. Thus, Malaysia would like to learn strategies, experiences and methods demonstrated in other countries such as Japan, French, etc. |
| 3) | Field | G. Policy/Planning/Administration |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Both (Go to abroad and invite foreign expert) |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | Classroom lecture on the experience. Fellowship program. Join research in public information and public awareness. Hands-on activities with the experts. Join a tour to public information facilities. Duration 1 to 3 months |
| 8) | Eligible person (background, career, etc.) | Officer who takes charge in policy planning, lecturers |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Malaysia-

| No. | | 2 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Nuclear Knowledge Management (NKM) |
| 2) | What is behind above need | Nuclear Malaysia as a research center that seriously focusing on nuclear and radiation application must take a lead in managing their nuclear corporate memories beside sustaining the expertise by collecting and preserving records of experience. Thus, we want to learn other's countries strategies, experiences and methods in managing their nuclear knowledge. |
| 3) | Field | H. Others |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Both (Go to abroad and invite foreign expert) |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | Classroom lecture. Fellowship program. Join research on NKM. Hands-on activities with the experts. Join a tour to nuclear knowledge facilities. Duration in 1 to 3 months. |
| 8) | Eligible person (background, career, etc.) | Officer who takes charge in NKM Planning and IT personel, lecturers |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Malaysia-

| No. | | 3 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Risk management/communication |
| 2) | What is behind above need | Managing risk is an important task for nuclear organization. Malaysia would like to strenghten the strategy and approch in dealing with risk communication. This can be obtain/learn from other countries who has develop nuclear energy earlier than us. Malaysia would like to learn way of identifying risks, managing threats, organizing, prioritization disseminating information to the public and decision makers and so on. this programme can be learn from advanced nuclear power countries. |
| 3) | Field | G. Policy/Planning/Administration |
| 4) | Level (Advanced/Medium/Basic) | All levels |
| 5) | Go to abroad/Invite foreign expert | Go Abroad |
| 6) | Priority (High/Medium/Low) | high |
| 7) | Preferable method and duration | on job training , fellowship |
| 8) | Eligible person (background, career, etc.) | project manager, top management, nuclear communicator |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Malaysia-

| No. | | 4 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Policy and planning related to Nuclear Science and Technology (S&T) |
| 2) | What is behind above need | To manage and coordinate cooperation with foreign and national institution in different field of Nuclear Science & Techology such as industry, healthcare, agricultue, environment and nuclear power |
| 3) | Field | G. Policy/Planning/Administration |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Invite foreign experts |
| 6) | Priority (High/Medium/Low) | medium |
| 7) | Preferable method and duration | * Classroom lecture on the experiences of Policy and planning related to Nuclear S&T<br>* Duration may be 1 or 2 weeks |
| 8) | Eligible person (background, career, etc.) | Officer  who takes charge of nuclear policy/planning related to nuclear S&T. University master degree |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Malaysia-

| No. | | 5 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | TRIGA MARK II Fuel burn up measurement and calculation |
| 2) | What is behind above need | 1. To obtain hand on training on simulation and measurement the nuclear fuel burnup at TRIGA MARK research reactor.<br>2. To use the method obtained from the training to enhance education and training program for under graduate level of nuclear engineering course at UNITEN and UTM |
| 3) | Field | C. Research Reactor;<br>E. Fuel/Material;<br>F. Nuclear/Radiation Safety |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Invite foreign expert |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | 4 weeks training (Simulations - 1 weeks ; Experiments - 3 weeks) |
| 8) | Eligible person (background, career, etc.) | 10 trainees comprised of 6 research officers from Malaysian Nuclear Agency and<br>4 university lecturers from nuclear engineering department in UNITEN and UTM. |
| 9) | Any Comments | Facility available:<br>1). Gamma spectrometer<br>2). Interlock Lead Shielding<br>3). Fuel transfer cask |

ANTEP Survey 2014
-Needs from Malaysia-

| No. | | 6 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | In-situ fuel failure detection for TRIGA research reactor fuel |
| 2) | What is behind above need | 1. To learn the design and development of test rig for in-situ fuel failure detection.<br>2. To obtain hands on training on conducting the fuel failure test. |
| 3) | Field | C. Research Reactor;<br>F. Nuclear/Radiation Safety |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | 4 weeks |
| 8) | Eligible person (background, career, etc.) | 2 researchers familiar with TRIGA research reactor |
| 9) | Any Comments | n/a |

ANTEP Survey 2014
-Needs from Malaysia-

| No. | | 7 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | NPP instrumentation and control |
| 2) | What is behind above need | 1. To learn about the system design of NPP instrumentation and control.<br>2. To obtain hands on training on instrumentation and control of NPP.<br>3. To acquire knowledge on NPP system maintenance. |
| 3) | Field | D. Nuclear Power Reactor<br>H. Others |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go abroad |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | 12 weeks |
| 8) | Eligible person (background, career, etc.) | 2 researchers (electronic engineering) |
| 9) | Any Comments | Preferable Nuclear Power Plant or training school |

ANTEP Survey 2014
-Needs from Mongolia-

| No. | | 1 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Human resource development |
| 2) | What is behind above need | Since 1962 Mongolia has been pursueing nuclear science and technology and set up own human resources framework in non-power field. However, after the introduction of the state policy on the exploitation of radioactive minerals and peaceful uses of nuclear energy in 2009, Mongolia expanded its activities in uranium expoloration and peaceful uses of nuclear energy. Relating to these activities, human resource development has been the priority to sustain the country's ambition plan. |
| 3) | Field | A. Radioactive Waste Management<br>B. Radiation and RI Application<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration<br>H. Others |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Graduate courses for 1-3 years including class room lectures and practices, and facility tours and on job training for short terms) |
| 8) | Eligible person (background, career, etc.) | Study young, professionals, students, teachers, researchers and authority |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Mongolia-

| No. | | 2 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Radiation protection and nuclear safety |
| 2) | What is behind above need | According to the state policy, Mongolia is engaged in exploitation of radioactive minerals and peaceful uses of nuclear energy. To succeed the state policy, the regulatory and legislation framework are to be updated through adapting and localizing international regulations and standards. |
| 3) | Field | F. Nuclear/Radiation Safety |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Invite foreign expert |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Open seminars and case studies |
| 8) | Eligible person (background, career, etc.) | professionals and inspectors |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Mongolia-

| No. | | 3 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Public awareness |
| 2) | What is behind above need | After Fukushima accident, public in Mongolia turned against nuclear energy in aid of anti-nuclear movements and world tendency. To implement effectively the state policy, Nuclear Energy Agnecy needs to work with the public closely. In order to work with public Nuclear Energy Agnecy is in lack of effective action plan, tactics, strategy and experience. Nuclear Energy Agency needs to have nuclear communicators. |
| 3) | Field | A. Radioactive Waste Management<br>B. Radiation and RI Application<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration<br>H. Others |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Invite foreign expert, go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Training course, Open seminars and case studies, share experience |
| 8) | Eligible person (background, career, etc.) | Professionals and lecturers and teachers, decision makers, journalists |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Mongolia-

| No. | | 4 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Nuclear and radiation safety culture: Characteristics of safety culture, |
| 2) | What is behind above need | To acquire knowledge to develop and promoting safety culture over competing goals to ensure protection of workers, public and the environment |
| 3) | Field | F. Nuclear/Radiation Safety |
| 4) | Level (Advanced/Medium/Basic) | Basic |
| 5) | Go to abroad/Invite foreign expert | Go to abroad, invite foreign expert |
| 6) | Priority (High/Medium/Low) | high |
| 7) | Preferable method and duration | seminar, share experience |
| 8) | Eligible person (background, career, etc.) | Professionals, teachers, stutents |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Mongolia-

| No. | | 5 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Improve radiochemistry analysis for environmental samples |
| 2) | What is behind above need | to establish and strenghtening radiochemistry laboratory |
| 3) | Field | A. Radioactive Waste Management |
| 4) | Level (Advanced/Medium/Basic) | Basic |
| 5) | Go to abroad/Invite foreign expert | invite foreign expert, go to abroad |
| 6) | Priority (High/Medium/Low) | medium |
| 7) | Preferable method and duration | Medium term training course 1-3 month |
| 8) | Eligible person (background, career, etc.) | Professionals, technicians, workers |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Mongolia-

| No. | | 6 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | develop to assessment of guarantee for environment protection and safety during uranium exploiration and explotaition |
| 2) | What is behind above need | Recently years many foreign and domestic mining companies has been working in Mongolia for uranium exploraition and exploitation. Environment impact assessment and safety for uranium minning is important issue in Mongolia |
| 3) | Field | G. Policy/Planning/Administration |
| 4) | Level (Advanced/Medium/Basic) | Basic |
| 5) | Go to abroad/Invite foreign expert | go to abroad |
| 6) | Priority (High/Medium/Low) | high |
| 7) | Preferable method and duration | Medium term training course 1-3 month |
| 8) | Eligible person (background, career, etc.) | Professionals, governmental officials |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Mongolia-

| No. | | 7 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Radioactive Waste treatment |
| 2) | What is behind above need | Nuclear Energy Agency of Mongolia has Radioactive waste storage facility. The Capacity of the facility is full in recently years. Knowledge on radioactive waste treatment is high necessary. |
| 3) | Field | A. Radioactive Waste Management |
| 4) | Level (Advanced/Medium/Basic) | Basic |
| 5) | Go to abroad/Invite foreign expert | invite foreign expert, go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Medium term training course 1-3 month, Expert mission 7-14 days |
| 8) | Eligible person (background, career, etc.) | Professionals, workers, engineers |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Mongolia-

| No. | | 8 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Development of environmental radiation monitoring around uranium mining |
| 2) | What is behind above need | To acquire knowledge on development of environmental radiation monitoring around uranium mining |
| 3) | Field | F.Nuclear/Radiation Safety |
| 4) | Level (Advanced/Medium/Basic) | Basic |
| 5) | Go to abroad/Invite foreign expert | Go to abroad/Invite foreign expert |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Medium term training course  1-3 month |
| 8) | Eligible person (background, career, etc.) | Professionals, inspectors, Governmental officials |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Mongolia-

| No. | | 9 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Research reactor, designs study and feasibility study |
| 2) | What is behind above need | To obtain advanced technologies needed for design, engineering and safety analysis of the new research reactor |
| 3) | Field | C.Research Reactor |
| 4) | Level (Advanced/Medium/Basic) | Basic |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Medium term training course  1-3 month |
| 8) | Eligible person (background, career, etc.) | Professionals, specialists |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Mongolia-

| No. | | 10 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Transportation security for the radioactive sources |
| 2) | What is behind above need | To provide participants in implementing maintaining or enhancing a nuclear security regime to protect radioactive waste while in transport against the theft, sabotage or other malicious acts and unacceptable radiological<br>consequences |
| 3) | Field | F. Nuclear/Radiation Safety |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad/Invite foreign expert |
| 6) | Priority (High/Medium/Low) | Advanced |
| 7) | Preferable method and duration | Medium term training course  1-3 month |
| 8) | Eligible person (background, career, etc.) | Professionals, |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Mongolia-

| No. | | 11 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Insect pest control using nuclear technique (SIT) |
| 2) | What is behind above need | To acquire knowledge on latest Sterile insect Technique (SIT) for pest control |
| 3) | Field | B. Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Basic |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | Medium term training course 1-3 month |
| 8) | Eligible person (background, career, etc.) | Professionals, |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Mongolia-

| No. | | 12 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Study electron beam application |
| 2) | What is behind above need | to enhance the level of knowledge and the capacity of the researcher for the application of electron beam to deal with environmental, industrial and agricultural applications. |
| 3) | Field | B. Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Basic |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | medium |
| 7) | Preferable method and duration | Medium term training course  1-3 month |
| 8) | Eligible person (background, career, etc.) | Professionals, |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Mongolia-

| No. | | 13 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Radiation Isotope Application for Environment |
| 2) | What is behind above need | To acquire knowledge on Application of radio isotope in environment; Using environmental RI and artificial RI to find out the causes of surface water and groundwater pollution and climate change; and Tracers application for water sources monitoring |
| 3) | Field | B.Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Basic |
| 5) | Go to abroad/Invite foreign expert | Go to abroad/Invite foreign expert |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | Lecture, Practice  etc. |
| 8) | Eligible person (background, career, etc.) | Professionals, |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Mongolia-

| No. | | 14 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Groundwater Modeling and Age determination |
| 2) | What is behind above need | To acquire knowledge on groundwater modeling, particle transport and simulation of groundwater age |
| 3) | Field | B.Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Basic |
| 5) | Go to abroad/Invite foreign expert | Go to abroad/Invite foreign expert |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | Lecture, Practice, Facility visit, etc. |
| 8) | Eligible person (background, career, etc.) | Professionals, |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Mongolia-

| No. | | 15 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Application of Radiotracer Technology in Industry and Environment |
| 2) | What is behind above need | To acquire knowledge on Different radiotracer techniques |
| 3) | Field | B.Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go to abroad/Invite foreign expert |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | Lecture, Practice, Facility visit, etc. |
| 8) | Eligible person (background, career, etc.) | Professionals, |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Mongolia-

| No. | | 16 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Trace Elements/Heavy Metals in Food and Environment |
| 2) | What is behind above need | To acquire knowledge on trace Elements/ Heavy Metals in Food and Environment |
| 3) | Field | B.Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | Medium term training course  1-3 month |
| 8) | Eligible person (background, career, etc.) | Professionals, |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Mongolia-

| No. | | 17 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Hygienization and radiation preservation of food and food products and Preparation of sterile foods |
| 2) | What is behind above need | To acquire knowledge on food irradiation for improvement of hygienic quality and shelf life extension of food |
| 3) | Field | B.Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Basic |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | Lecture, Practice, Facility visit, etc. |
| 8) | Eligible person (background, career, etc.) | Professionals, |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Mongolia-

| No. | | 18 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Determination of age of different fossil fuels using Radioisotopes/Radiocarbon dating of different archaeological samples |
| 2) | What is behind above need | To acquire knowledge on the application of RI to study the ages of different archaeological samples |
| 3) | Field | B.Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Invite foreign expert |
| 6) | Priority (High/Medium/Low) | Low |
| 7) | Preferable method and duration | Lecture, Practice |
| 8) | Eligible person (background, career, etc.) | Professionals, |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Mongolia-

| No. | | 19 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Study of Non Destractive Testing |
| 2) | What is behind above need | to strengthening NDT laboratory of Science and Technology University |
| 3) | Field | B.Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | training course, |
| 8) | Eligible person (background, career, etc.) | Professionals, |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Philippines-

| No. | | 1 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Sorption and diffusion of heavy metals or radioactive materials on clay minerals |
| 2) | What is behind above need | To gain more in-depth knowledge and aware- ness of technology and methodology in this field |
| 3) | Field<br>*Please select from following fields to fill in.<br>A. Radioactive Waste Management<br>B. Radiation and RI Application<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration<br>H. Others | A. Radioactive Waste Management |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | |
| 7) | Preferable method and duration | Training, 6 months |
| 8) | Eligible person (background, career, etc.) | Master’s degree or bachelor’s degree in science and technology<br>(1 trainee) |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Philippines-

| No. | | 2 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Development of highly selective adsorbents by EB radiation processing of biodegradable polymeric materials |
| 2) | What is behind above need | To gain more in-depth knowledge and aware- ness of technology and methodology in this field |
| 3) | Field<br>*Please select from following fields to fill in.<br>A. Radioactive Waste Management<br>B. Radiation and RI Application<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration<br>H. Others | B. Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | |
| 7) | Preferable method and duration | Training, 6 months |
| 8) | Eligible person (background, career, etc.) | Master’s degree or bachelor’s degree in science and technology<br>(1 trainee) |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Philippines-

| No. | | 3 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Radiation dosimetry assessment |
| 2) | What is behind above need | To gain more in-depth knowledge and aware- ness of technology and methodology in this field |
| 3) | Field<br>*Please select from following fields to fill in.<br>A. Radioactive Waste Management<br>B. Radiation and RI Application<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration<br>H. Others | B. Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | |
| 7) | Preferable method and duration | Training, 6 months |
| 8) | Eligible person (background, career, etc.) | Master’s degree or bachelor’s degree in science and technology<br>(1 trainee) |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Philippines-

| No. | | 4 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Synthesis and characterization of nanomaterials |
| 2) | What is behind above need | To gain more in-depth knowledge and aware- ness of technology and methodology in this field |
| 3) | Field<br>*Please select from following fields to fill in.<br>A. Radioactive Waste Management<br>B. Radiation and RI Application<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration<br>H. Others | B. Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | |
| 7) | Preferable method and duration | Training, 6 months |
| 8) | Eligible person (background, career, etc.) | Master’s degree or bachelor’s degree in science and technology<br>(1 trainee) |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Philippines-

| No. | | 5 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Conceptual design study of small size research reactor |
| 2) | What is behind above need | To gain more in-depth knowledge and aware- ness of technology and methodology in this field |
| 3) | Field<br>*Please select from following fields to fill in.<br>A. Radioactive Waste Management<br>B. Radiation and RI Application<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration<br>H. Others | C. Research Reactor |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | |
| 7) | Preferable method and duration | Training, 6 months |
| 8) | Eligible person (background, career, etc.) | Master’s degree or bachelor’s degree in science and technology<br>(1 trainee) |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Philippines-

| No. | | 6 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Properties of nuclear reactor materials under neutron irradiation |
| 2) | What is behind above need | To gain more in-depth knowledge and aware- ness of technology and methodology in this field |
| 3) | Field<br>*Please select from following fields to fill in.<br>A. Radioactive Waste Management<br>B. Radiation and RI Application<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration<br>H. Others | C. Research Reactor |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | |
| 7) | Preferable method and duration | Training, 6 months |
| 8) | Eligible person (background, career, etc.) | Master’s degree or bachelor’s degree in science and technology<br>(1 trainee) |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Philippines-

| No. | | 7 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Radionuclide applications in industry |
| 2) | What is behind above need | To enhance capability in this area of study |
| 3) | Field<br>*Please select from following fields to fill in.<br>A. Radioactive Waste Management<br>B. Radiation and RI Application<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration<br>H. Others | B. Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | |
| 7) | Preferable method and duration | OJT, 2 months |
| 8) | Eligible person (background, career, etc.) | Master's degree or bachelor's degree in science and technology<br>(2 trainees) |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Philippines-

| No. | | 8 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Radionuclide applications in health care |
| 2) | What is behind above need | To enhance capability in this area of study |
| 3) | Field<br>*Please select from following fields to fill in.<br>A. Radioactive Waste Management<br>B. Radiation and RI Application<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration<br>H. Others | B. Radiation and RI Applicatio |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | |
| 7) | Preferable method and duration | OJT, 2 months |
| 8) | Eligible person (background, career, etc.) | Master’s degree or bachelor’s degree in science and technology<br>(2 trainees) |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Philippines-

| No. | | 9 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Radioactive waste management |
| 2) | What is behind above need | To enhance capability in this area of study |
| 3) | Field<br>*Please select from following fields to fill in.<br>A. Radioactive Waste Management<br>B. Radiation and RI Application<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration<br>H. Others | A. Radioactive Waste Management |
| 4) | Level (Advanced/Medium/Basic) | Basic |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | |
| 7) | Preferable method and duration | OJT, 2 months |
| 8) | Eligible person (background, career, etc.) | Master’s degree or bachelor’s degree in science and technology<br>(2 trainees) |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Philippines-

| No. | | 10 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Radiation Safety – Behavior of radiation |
| 2) | What is behind above need | To gain knowledge and be trained in radiation metrology |
| 3) | Field<br>*Please select from following fields to fill in.<br>A. Radioactive Waste Management<br>B. Radiation and RI Application<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration<br>H. Others | F. Nuclear/Radiation Safety |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | |
| 7) | Preferable method and duration | Training, 3 months |
| 8) | Eligible person (background, career, etc.) | Master’s degree or bachelor’s degree in science and technology<br>(1 trainee) |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Philippines-

| No. | | 11 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Calibration of various high dose dosimeters for radiation protection / radiation processing |
| 2) | What is behind above need | To enhance knowledge and develop skill to help improve calibration of dosimeters |
| 3) | Field<br>*Please select from following fields to fill in.<br>A. Radioactive Waste Management<br>B. Radiation and RI Application<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration<br>H. Others | F. Nuclear/Radiation Safety |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | |
| 7) | Preferable method and duration | Training, 3 months |
| 8) | Eligible person (background, career, etc.) | Master’s degree or bachelor’s degree in science and technology<br>(2 trainees) |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Philippines-

| No. | | 12 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Management of radioactive waste from radioisotope users |
| 2) | What is behind above need | To enhance knowledge and develop skill to help improve operations in the facility |
| 3) | Field<br>*Please select from following fields to fill in.<br>A. Radioactive Waste Management<br>B. Radiation and RI Application<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration<br>H. Others | A. Radioactive Waste Management |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | |
| 7) | Preferable method and duration | Training, 3 months |
| 8) | Eligible person (background, career, etc.) | Master’s degree or bachelor’s degree in science and technology<br>(1 trainee) |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Philippines-

| No. | | 13 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Evaluation of the amount of radioactivity in nuclear facilities |
| 2) | What is behind above need | To gain knowledge in evaluating the residual radioactivity during decommissioning which will be essential in the future activities of the decommissioning project |
| 3) | Field<br>*Please select from following fields to fill in.<br>A. Radioactive Waste Management<br>B. Radiation and RI Application<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration<br>H. Others | C. Research Reactor |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | |
| 7) | Preferable method and duration | Training, 3 months |
| 8) | Eligible person (background, career, etc.) | Master’s degree or bachelor’s degree in science and technology<br>(1 trainee) |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Thailand-

| No. | | 1 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | 1.New application of Gamma , E-beam and X-ray used in industrial scale<br>2. Dosimetry in Gamma , E-beam and X-ray Facilities |
| 2) | What is behind above need | |
| 3) | Field | B. Radiation and RI Application<br>H. Others |
| 4) | Level (Advanced/Medium/Basic) | Advanced and Medium |
| 5) | Go to abroad/Invite foreign expert | |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | the training, research and development, technical visit, or lecture |
| 8) | Eligible person (background, career, etc.) | Science / Engineer |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Thailand-

| No. | | 2 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Nuclear Security Culture |
| 2) | What is behind above need | To disseminate this knowledge to the people who involve in nuclear activities. |
| 3) | Field | G. Policy/Planning/Administration |
| 4) | Level (Advanced/Medium/Basic) | Basic |
| 5) | Go to abroad/Invite foreign expert | Invite expert |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture |
| 8) | Eligible person (background, career, etc.) | A person who involve in nuclear activities |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Thailand-

| No. | | 3 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Thermal hydraulic experiments/ severe accident experiments |
| 2) | What is behind above need | To deepen the understanding toward the behavior of the reactor core during an accident. |
| 3) | Field | D. Nuclear Power Reactor<br>F. Nuclear/Radiation Safety |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | Research and development, 1-3 months |
| 8) | Eligible person (background, career, etc.) | Have adequate background on nuclear safety and thermal hydraulics |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Thailand-

| No. | | 4 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | 1) Application of accelerator-based neutron beam lines for research and development in radiation dosimetry and instrumentation<br>2) Setting up a standard calibration facility for neutron measuring devices |
| 2) | What is behind above need | 1) To apply accelerator-based monoenergetic neutron beam lines in development and QA of neutron spectrometers and neutron detection systems<br>2) To obtain expert advice and technical support on setting up a calibration facility for neutron measuring devices in Thailand |
| 3) | Field | F. Nuclear/Radiation Safety |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad & invite expert |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | 1) Training, technical visit & experimentation at accelerator-based neutron beam lines (at a foreign institution, 1-2 months) with prior and follow-up communication & collaborative work<br>2.1) Training and technical visit at a standard laboratory for calibration of neutron measuring devices and neutron source strength calibration (at a foreign institution, 1-2 months)<br>2.2) Technical visit by foreign experts for giving advice and technical support on setting a calibration facility for neutron measuring devices (invitation to TINT, 1-2 months) with follow-up communication & collaborative work |
| 8) | Eligible person (background, career, etc.) | Nuclear/radiation physicists, nuclear engineers with research/working area in radiation physics/dosimetry/protection |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Thailand-

| No. | | 5 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Measurement of radon, thoron and uranium concentration in water and soil sample for active fault and possible relation to earthquakes. |
| 2) | What is behind above need | To learning new technology, new skill for measuring radon thoron and uranium concentration for earthquakes prediction. |
| 3) | Field | B. Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | research and development |
| 8) | Eligible person (background, career, etc.) | education background and work |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Thailand-

| No. | | 6 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | 1. Training on F-18 precursor synthesis.<br>2. Research partnership on molecular aspects of radiation biology |
| 2) | What is behind above need | 1) For the production of F-18 PET radiopharmaceuticals 2) To identify and modulate the response of human cells to radiation treatments at the molecular level. |
| 3) | Field | B. Radiation and RI Application<br>H. Others |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High and Medium |
| 7) | Preferable method and duration | 3 months of research in an experienced laboratory |
| 8) | Eligible person (background, career, etc.) | Master degree with experiences in organic synthesis and Ph.D. degree with experiences in molecular biology. |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Thailand-

| No. | | 7 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | This program is intended on the nuclear safety in nuclear power reactor which the content include with Siting consideration and environmental impact assessment, Nuclear reactor design , Thermal hydraulic in nuclear reactor, Severe accident and accident manament, Management and assessment nuclear safety, Risk informed decision making, Operational safety, Waste mangement, Radiation protection, Human performance and public communication |
| 2) | What is behind above need | To increase human resources who have the knolwdge and understand the behavior of nuclear power reactor in orderr to operate the reactor safety |
| 3) | Field | D. Nuclear Power Reactor<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration |
| 4) | Level (Advanced/Medium/Basic) | Advanced/Medium |
| 5) | Go to abroad/Invite foreign expert | Invite expert for lecture, go to aboard for training and doing research and development |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture : 6 months, Training :  6 months, Reasearch and development : 6 months |
| 8) | Eligible person (background, career, etc.) | 1) Engineers or Scientists graduated in Bachelor degree or Master degree in Machanical engineering, Electrical engineering, Nuclear engineering or equivalent 2) Good command of English language |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Thailand-

| No. | | 8 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Nuclear power plant safety and accident analysis |
| 2) | What is behind above need | To analyze NPP accident |
| 3) | Field | F. Nuclear/Radiation Safety |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | Training for 2 months |
| 8) | Eligible person (background, career, etc.) | Nucleaar engineer |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Thailand-

| No. | | 9 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Atmospheric dispersion model |
| 2) | What is behind above need | To estimate and presict the dowmwing concentration of air poolutants and apply to design emergency response plan |
| 3) | Field | F. Nuclear/Radiation Safety |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Lecture and similation |
| 8) | Eligible person (background, career, etc.) | M.Sc. In Nuclear Technology Radiation protection traing Environmental radiation monitoring |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Thailand-

| No. | | 10 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Treatment and disposal process of radioactive waste and spent nuclear fuel |
| 2) | What is behind above need | To understand the process of radioactive waste management in nuclear power plant |
| 3) | Field | A. Radioactive Waste Management |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | On the job traning |
| 8) | Eligible person (background, career, etc.) | M.Sc. In Nuclear Technology, now my job is to study radioactive waste management for Thailand's nuclear power project |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Thailand-

| No. | | 11 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | On-site emergency management planning |
| 2) | What is behind above need | To draft the nuclear emergency management plan and prepare the emergency organization as well as emergency persons |
| 3) | Field | F. Nuclear/Radiation Safety |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Training for 2 weeks |
| 8) | Eligible person (background, career, etc.) | Nuclear engineer |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Thailand-

| No. | | 12 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Instrumenatal analysis of radionuclides |
| 2) | What is behind above need | To strengthen competency of our staff on measurement and analysis of radionuclide by various instrument eg γ,β or α spectrometry and LSC |
| 3) | Field | B. Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Advanced/Medium |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | Training |
| 8) | Eligible person (background, career, etc.) | |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Thailand-

| No. | | 13 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Design and utilization of high-power research reactors |
| 2) | What is behind above need | In order to obtain experience on the design and utilization of high-power research reactor (i.e. > 2 MW). |
| 3) | Field | C. Research Reactor |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | The preferred method is to have the on-site training at a high-power research reactor. The program may contain the study of design of the research reactor, having hands-on experience on the utilization of high-power research reactor including beam port experiments (e.g. neutron HRPD, PGNAA, cold neutron source, etc.). Also, the trainee may learn the advanced irradiation techniques such as NTD, isotope production, advanced NAA techniques and etc. |
| 8) | Eligible person (background, career, etc.) | The candidate should have technical background in nuclear science and engineering. The candidate should have fundamental knowledge or be involved in the operation, utilization and maintenance of a research reactor. |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Thailand-

| No. | | 14 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Development and Implementation of New Radiopharmaceuticals for PET Imaging for health care applications |
| 2) | What is behind above need | The project aims to make available new and necessary PET radiopharmaceuticals for the diagnosis of cancers, brain diseases and inflammation in Thailand and also aims to strengthen national capabilities in the production, quality control and distribution of new PET radiopharmaceuticals. Moreover, it aims to create awareness and knowledge about application of PET in cancer patients and brain disease. Siriraj Hospital will focus on the design and development of 18F-labeled compounds which are more specific to prevalent types of cancer in Thailand. |
| 3) | Field | B. Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Both |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | The project will be 1 years. Fellowships : 5 staffs (2 radiochemists, 2 Physicists, 1 Radiopharmacist) 2 months each, Scientific visits : 1 Senior staff for 1 week, Training courses : 2 week for PET Tracer on site, Expert or Technical visit : 2 weeks, Workshops : 1 week on site |
| 8) | Eligible person (background, career, etc.) | All NM Staff: 2 B.Sc. (chemist) 2 M.Sc. (chemist) 1 Ph.D. Pharmacist, 4 M.Sc. (Physicist) 1 Ph.D. Biophysics |
| 9) | Any Comments | The 11th National Economic and Social Development Plan (2012-2016) of Thailand has adopted the new model of holistic people-centered development, sufficiency economy and happiness society. One of its aims is to empower social capital of which a healthy society serves at its root. One of its strategies is to develop science and technology, research, and innovation as driving forces for sustained and inclusive growth. This program of technical cooperation will allow Thailand to develop new tracers that will benefit Thai citizens and it also fits well with the national strategy to use science and technology for sustainable development. |

ANTEP Survey 2014
-Needs from Thailand-

| No. | | 15 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | -Development of PET and SPECT radiopharmaceuticals<br>- Radiation protection and Radiation safety for Nuclear Medicine (NM)<br>- Image processing in NM<br>- Advance technique for imaging with PET and SPECT<br>- Quality control and Quality assurance for NM service |
| 2) | What is behind above need | - To develop new tracers in NM and to improve radiopharmaceuticals scientist's knowledges.<br>- To improve NM services and establish qualifies NM center to meet with international standard.<br>- To improve image quality of NM imaging<br>- To reduce radiation exposure to patients, staff and environment |
| 3) | Field | B. Radiation and RI Application<br>F. Nuclear/Radiation Safety<br>H. Others |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Both |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | training, research and Development technical visit, meeting |
| 8) | Eligible person (background, career, etc.) | Radiopharmaceutical scientist, medical physicist in NM, radiation technologist, NM nurse has been work in NM who got at least B.Sc. degree. |
| 9) | Any Comments | Although infrastructures and facilities in our NM department have been improved, installed and implements, well trained staffs especially for radiopharmaceutical scientist, medical physicist in NM, radiation technologist, NM nurse are highly required. |

ANTEP Survey 2014
-Needs from Thailand-

| No. | | 16 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Radiation Processing of Polymers for Environmental Application |
| 2) | What is behind above need | To obtain knowledge and research experience on electron beam application for environmental application |
| 3) | Field | B. Radiation and RI Application |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Research and Development/ 3 months |
| 8) | Eligible person (background, career, etc.) | M.Sc. in Polymer Science |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Thailand-

| No. | | 17 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Hand on trainings with actual equipment and with actual problems conditions |
| 2) | What is behind above need | To familiarize students and teachers on new development / applications |
| 3) | Field | A. Radioactive Waste Management<br>B. Radiation and RI Application<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | depend on the scale of training and resource required. |
| 8) | Eligible person (background, career, etc.) | Training (1-3 months), Research (6-12 months), Technical visit (< 1 months), Lecture (1 semester) MS and PhD. |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Vietnam-

| No. | | 1 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Post graduate education in Nuclear Engineering |
| 2) | What is behind above need | Vietnam as a newcomer country will operate the first NPP in 2023-2024. A Center for Nuclear Science and Technology will be built having a research reactor with 10-14 MW in power and research laboratories. The post graduate students will become the human resources for the program of NPP, regulators, inspectors and heads of research directions. |
| 3) | Field<br>*Please select from following fields to fill in.<br>A. Radioactive Waste Management<br>B. Radiation and RI Application<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration<br>H. Others | A. Radioactive Waste Management<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration |
| 4) | Level (Advanced/Medium/Basic) | Advanced |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | High |
| 7) | Preferable method and duration | Long period of time (2 year for Master degree and 3-5 year for PhD degree) |
| 8) | Eligible person (background, career, etc.) | Officers, Researchers, University lectures, Excellent students<br>University degree, Master degree, PhD degree |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Vietnam-

| No. | | 2 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Basics Professional Training Course on Nuclear Energy |
| 2) | What is behind above need | To provide the basic education on nuclear technologies and related subjects |
| 3) | Field<br>*Please select from following fields to fill in.<br>A. Radioactive Waste Management<br>B. Radiation and RI Application<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration<br>H. Others | A. Radioactive Waste Management<br>B. Radiation and RI Application<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration<br>H. Others |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go to abroad |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | Class room lecture in 2-3 weeks |
| 8) | Eligible person (background, career, etc.) | The cadres of the regulatory agency, Universities, R&D Institutions |
| 9) | Any Comments | |

ANTEP Survey 2014
-Needs from Vietnam-

| No. | | 3 |
|---|---|---|
| | Question | Answer |
| 1) | Content of training/education that you need | Instructor Training Program, Follow up Training Course on Nuclear Energy |
| 2) | What is behind above need | To support transfer of nuclear-related knowledge, skills and experience to young members working in nuclear energy and related fields |
| 3) | Field<br>*Please select from following fields to fill in.<br>A. Radioactive Waste Management<br>B. Radiation and RI Application<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration<br>H. Others | A. Radioactive Waste Management<br>B. Radiation and RI Application<br>C. Research Reactor<br>D. Nuclear Power Reactor<br>E. Fuel/Material<br>F. Nuclear/Radiation Safety<br>G. Policy/Planning/Administration<br>H. Others |
| 4) | Level (Advanced/Medium/Basic) | Medium |
| 5) | Go to abroad/Invite foreign expert | Go to abroad/ Invite foreign expert |
| 6) | Priority (High/Medium/Low) | Medium |
| 7) | Preferable method and duration | On job training in 2-3 weeks |
| 8) | Eligible person (background, career, etc.) | The cadres of VINATOM, Universities |
| 9) | Any Comments | |