Human Resources Development (HRD) for Asian Nuclear Research & Development by MEXT, Japan

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1. MEXT's Contribution to HRD of Nuclear Research & Development in Asia

(1) The Nuclear Researchers Exchange Program(1985~)

1)Invitation to Research Institutes

- Period: 3~12 months
- Size : 15 persons per year
- Course Outline: OJT, Research, Experiment

2) Invitation to National Universities

- Period: 6~12 months
- Size : 10 persons per year
- Course Outline: Research

3) Dispatch of Experts

- Period: 1 week
- Size : 10 persons per year
- Course Outline: Dispatch Japanese experts on request

1. MEXT's Contribution to HRD of Nuclear Research & Development in Asia

(2) Instructor Training Program (1996~)

Invitation to Research Institutes

- Period: 4~6 weeks
- Size : 2~4 persons per year per country
- Contents:

Lectures, exercises, and experiments on the following subjects

(1) Operation, Design, and Protection
(2) Emergency Preparedness
(3) Application of Nuclear Techniques in Industry and the Environment
(4) Reactor Engineering
(5) Nuclear Safety/Safeguards

- Objective:

Training participants to become instructors

1. MEXT's Contribution to HRD of Nuclear Research & Development in Asia

(3) International Seminar on Nuclear Safety

1) Administrative Management Course(2002～)

- Period: 3 Weeks
- Size: 8 persons per year

2) Plant Safety Course (2006~)

- Period： 4 weeks
- Size ： 10 persons × 2 times per year

3) Safeguard Training Course (1996~)

- Period： 2 weeks
- Size ： 10 persons per year

2. MEXT HRD Program Results

(1) Asian Nuclear Researchers invited to Japan by MEXT program

	Total	Since
Nuclear Researchers Exchange Program (Invitation)	1,491	Year 1985
Instructor Training Program (Invitation)	87	Year 1996
International Seminar on Nuclear Safety	982	Year 1987
Total	2,560	

2. MEXT HRD Program Results

(2) Japanese Nuclear Researchers Dispatched to Asian Countries by MEXT Programs

	Total	Since (year)
Nuclear Researchers Exchange Program (Dispatch)	604	1985
Nuclear Safety Dispatching Program	209	1993 (～2005)
Instructor Training Program (Dispatch)	310	1997
Total	1,123	

3. Re-examining the Asian Nuclear Cooperation Program

(1) Present Issue

(Entirety)

○The FNCA and other 3 programs have been conducted individually/separately; mutual cooperation is insufficient. A cooperative linking between programs is desirable.

(Nuclear Researchers Exchange Program)

○ Present research theme is led by the inviting institutions, instead of by the needs of Asia, based on each country's priorities.

○ With regards to dispatch of experts, one that meets the needs should be selected adequately and dispatched for as long as is necessary.

(Instructor Training Program)

○ Providing every possible help, i.e., 3 steps training (invitation, joint hosting, and follow up training) is inefficient.

(International Seminars on Nuclear Safety)

○ The different levels of the trainees results in inefficient and ineffective training.

3. Re-examining the Asian Nuclear Cooperation Program

(2) Direction of Review: Asian Nuclear Cooperation Entirety

(Review of framework)

○ FNCA would be the core of Asian nuclear cooperation, and other programs would be positioned as cooperative programs, in terms of contents.

○Consider inviting additional countries and designating special assistance countries.

(Review of operations)

○Enhance intellectual network through meetings with past invitees of FNCA workshops, etc.

○ Nuclear Researchers Exchange Program trainee is allowed to participate in Asian nuclear cooperation programs such as Instructor Training Program, International Seminars on Nuclear Safety subject to their wishes.

○Trainee data after visiting JAPAN should be followed up. And investigating needs of research content should be performed, reflected selection of trainee in the next fiscal year.

3. Re-examining the Asian Nuclear Cooperation Program

(3) Direction of Review: FNCA Project

〔Re-examining the framework〕

○We are considering stimulating FNCA activity by utilizing Science and Technology ODA with regards to research themes for resolving worldwide issues/problems.

〔Re-examining operations〕

○ The FNCA project would be suitably changed into new themes in accordance with member countries' needs.

○ As an additional theme, we are planning to set a comprehensive project for the "formulation of nuclear infrastructure," upon examining the introduction of nuclear power in respective countries.

○ Through ANTEP, we will continue matching programs and needs appropriately.

3. Re-examining the Asian Nuclear Cooperation Program

(4) Future direction of the re-examination: The Nuclear Researchers Exchange Program (1985~)

〔Re-examining the framework〕

○ This program would expand the number of participating countries and set up flexible dispatch terms, while the present system for invitation and dispatch will be focused on supporting R&D and be maintain as is.

〔Re-examining operations〕

○ Propose core subjects tailored to the FNCA project, instead of those provided by host organizations. As for specific subjects, modify it from the existing selection-type to the open-type call.

○ When selecting core subjects, make it a point to correlate core subjects with the FNCA project's contents, especially research areas such as research reactor utilization and radioactive safety/waste management.

○ When the applicant proposes their research content, this program requires the applicants' research theme to fall under the categories that are in line with their field of expertise and respective country's priorities.

3. Re-examining the Asian Nuclear Cooperation Program

(5) Future direction of the re-examination：Instructor Training Program (1996~)

〔Re-examining the framework〕

○ Invitation training, joint hosting training, and follow-up training, would be set up as options of the instructor training program. Therefore, joint hosting training would be discontinued, in principle.

○ With the cancellation of joint hosting training, support for various nations involved in our programs would be expanded, in addition to Indonesia, Thailand, and Vietnam.

〔Re-examining operations〕

○ Improve training efficiency by setting up programs for trainees with a certain level of expertise.

○ In recruitment activities in each country, acknowledge the needs of each country's instructor training program, such as including not only research facilities but also universities as host organizations.

○ Reflect the result of training activities in subsequent years, through reports on each country's activities status, including the number of times courses are offered related in different countries, etc.

3. Re-examining the Asian Nuclear Cooperation Program

(6) Future direction of the re-examination：International Seminar on Nuclear Safety

(Re-examining the framework)

○ Establishment of revamped courses will be considered according to necessity, while the existing Administrative Management Course, Plant Safety Course, and Safeguard Training Course will continue.

(Re-examining operations)

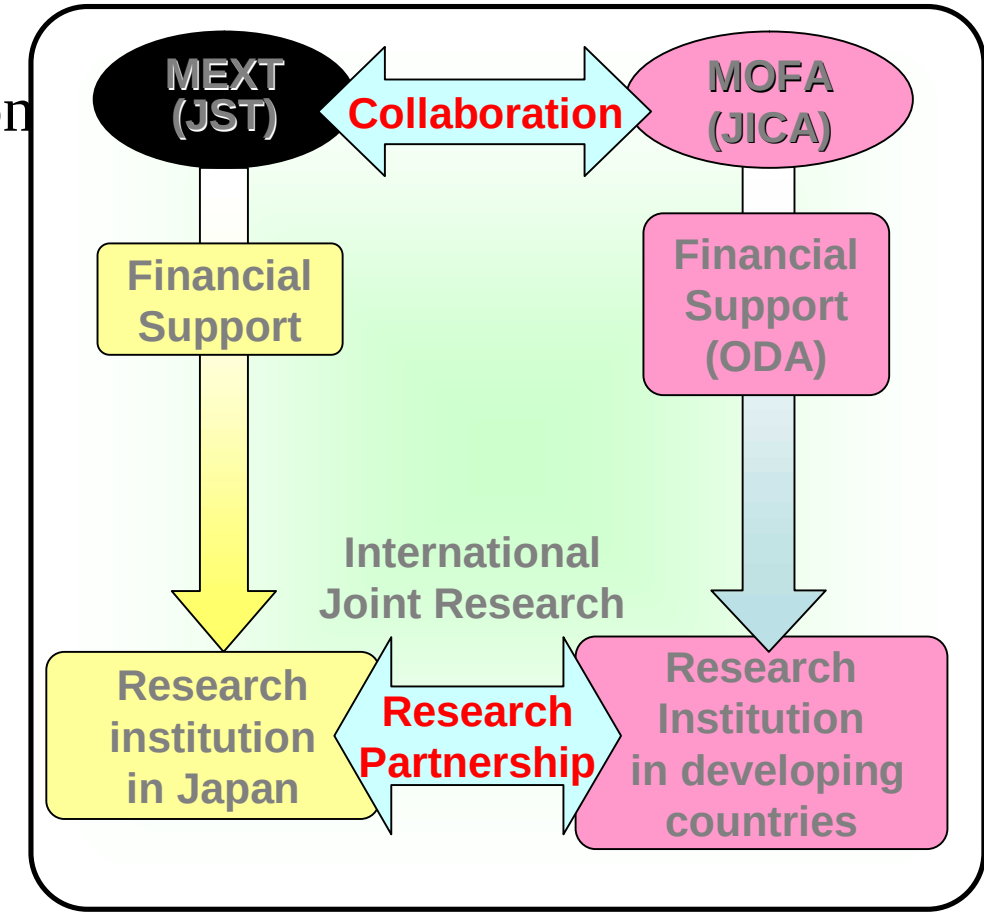
○ To avoid dramatic variations in the participants, recruitment and selection will be narrowed down to not only age but position and organization, etc.

4. Topic

S&T cooperation with Asian countries on global issues

1) Targeting global issues
   >environment/energy preservation
   >disaster prevention
   >infectious diseases

2) Content
   MEXT (JST) & MOFA (JICA) provide financial support to S&T cooperation between Japanese institutions and the developing country's institutions.



5. Conclusion

- In Japan, three Nuclear HRD programs underwent reviews this year in order to better cope with the area of nuclear technology development.
- New countermeasures are expected to enhance human resources for research & development of nuclear technology.
- Outcomes of this effort will ultimately contribute to the peaceful use of nuclear technology worldwide, including in Asia.

5. Conclusion

- MEXT would like to offer various kinds of effective support to Asian countries, in the nuclear field, through revisions to Asian nuclear cooperation program plans and the utilization of ODA projects, etc.

- I am looking forward to the active participation of member countries in these programs.