



# FEASIBILITY STUDY REPORT FOR THE RCA SCHOLARSHIP PROGRAMME FINAL DRAFT REPORT September, 2022



## Version History

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**ACRONYMS**

<b>GCM</b>	General Conference Meeting
<b>GOR</b>	RCA Guidelines and Operating Rules
<b>GP</b>	Government Party
<b>HRD</b>	Human Resource Development
<b>HR</b>	Human Resource
<b>IAEA</b>	International Atomic Energy Agency
<b>LCC</b>	Lead Country Coordinator
<b>LDC</b>	Least Developed Country
<b>MOU</b>	Memorandum of Understanding
<b>MS</b>	Member State
<b>MTS</b>	Medium Term Strategy
<b>NRM</b>	National RCA Representatives Regional Meeting
<b>NS&amp;T</b>	Nuclear Science and Technology
<b>NPC</b>	National Project Coordinator
<b>PAC</b>	Programme Advisory Committee
<b>QMS</b>	Quality Management System
<b>R&amp;D</b>	Research & Development
<b>RCA</b>	Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology
<b>RCARO</b>	RCA Regional Office
<b>SIDS</b>	Small Island Developing States

## **EXECUTIVE SUMMARY**

### **Introduction**

1. Strategic Direction 5 in the RCA 2018-2023 Medium-Term Strategy (MTS) states that the RCA will continue building human capacity, including education and training and nuclear knowledge management.
2. The 43<sup>rd</sup> RCA NR Meeting held in April 2021 and the 50<sup>th</sup> RCA GCM held in September 2021 took note of the proposal to set up the RCA Scholarship Programme by the RCA Focal Person. Accordingly, the Committee of the RCA Scholarship Programme (SPS) was established to develop further details of the Scholarship Programme to be reported to the 44<sup>th</sup> NRM for its approval.
3. At the 44<sup>th</sup> RCA NR Meeting, all Government Parties (GPs) noted the benefits that the programme could bring to the region in strengthening human resources and achieving sustainable development in the field of nuclear science and technology (NS&T) and related nuclear applications. However, the Meeting agreed on the need to undertake an in-depth study of the programme before it could be launched and requested the Committee to make and submit a report on the feasibility study to the 51<sup>st</sup> GCM for consideration and decision. An announcement on the long-term aspiration of the RCA GPs for the establishment of the RCA Scholarship Programme may be made during the Ministerial Level Meeting in September 2022.
4. The Feasibility Study (FS) is carried out by the RCA Scholarship Committee chaired by Viet Nam, with the constant support and guidance from the RCA Focal Person and experts of the IAEA.

### **Rationale and context**

5. Education and training in the field of NS&T and related applications are critical to sustainable development in the 21<sup>st</sup> century as it creates critical thinkers, high-quality human resources, increases science literacy, and enables the next generation of innovators. Innovation leads to new products and processes that sustain economies. Innovation and science literacy depend on a solid knowledge base grounded in a well-developed education programme. This programme provides students with a well-rounded foundation of academic and practical skills to help them understand a wide range of concepts and thrive in many industries.
6. A well-developed education platform is a prerequisite for developing a workforce skilled in NS&T, thereby enhancing the role plays in supporting of sustainable social and economic development.

7. The building of a nuclear workforce under the RCA has been carried out for many years, but only in the form of short regional training courses (one or two weeks). For example, over the last seven years, more than eighty training courses were organized under RCA projects, which were attended by more than 1,900 participants. Such training courses serve specific purposes in supporting each individual RCA research project. However, unless supported by a higher degree by research programme with more specifics, the contribution of such efforts is limited in deepening and expanding the development of the required human resources for safe, secure and peaceful utilization of nuclear technology for sustainable development in the RCA Government Parties.
8. These training courses have contributed to improving the application capability in application of nuclear science and technology in member states through the exchange of information. However, without a clear roadmap, it will be difficult to develop sufficient and knowledgeable human resources for nuclear science and technology, ensuring the sustainable development of all members of the RCA.
9. Furthermore, in some developing countries, the attractiveness of higher education in NS&T and related nuclear application is not high compared to other fields.
10. In some least-developed countries and small islands, there are not any postgraduate programmes for NS&T and related nuclear applications.
11. Thus, these observations clearly show that there is an urgent need for the RCA to establish a long-term RCA Scholarship Programme to serve as a solid foundation for sustainable applications of nuclear science and related technologies in member countries, particularly for the least-developed countries and small island countries in the region, helping them to receive maximum benefits when participating in the RCA programme.

### **The proposed RCA Scholarship programme**

12. The RCA Scholarship Programme would be established to improve highly qualified human resources at the level of Master's degree for the RCA Member States and aims to cultivate professionals in the areas of nuclear and radiation technology. The programme's graduates have opportunities to work in government-supported R&D institutions, government-funded enterprises, or universities, etc. The programme targets about 1000 RCA Scholarships awarded by 2032.
13. In the 1<sup>st</sup> phase, the RCA Scholarship Programme will strongly

support nationals undertaking Master’s level training in each Government Party in existing nuclear science and technology postgraduate programmes and related applications.

14. The admission fee, 2-year tuition fee, allowance and living cost will be covered by this scholarship based on the IAEA financial regulation in each country.
15. The RCA aims to establish a long-term programme for education and training that acts as a solid platform and the backbone for the sustainable applications of nuclear and science technology and related application in RCA GPs.
16. In the 1<sup>st</sup> phase, this programme will be piloted for 3 years with a review and assessment at the conclusion of this period before moving onto the 2<sup>nd</sup> phase in which this programme will be expanded to include the doctoral course and international exchange Programme.

### Financing Plan

17. This section summarizes the mobilization resource to sustain the RCA Scholarship Programme.
18. The estimated total investment cost of the RCA Scholarship for master courses is based on the scenarios 1 and 2 are 3,250,378 US\$ and 1,606,668 US\$, respectively (Refer to Table 1 and Appendix 1 ).
19. The RCA Programme uses two different sources of capital: IAEA support and in-kind contribution from each GPs as shown in Table 1.
20. The in-kind contribution is understood as utilization of education facilities such as classrooms, experimental apparatus, and lecturers.
21. The current understanding is that IAEA will provide a financial support of 80% of RCA Scholarship Programme for the pilot phase and the other contributions will be allocated by in-kind contribution or Extra-budgetary in term of donation from the GPs up to 20%.

**Table 1: Total Programme cost and break down of contribution by financial source for scenario 1 and 2**

Source	Amount		Share of total (%)
	Scenario 1	Scenario 2	
IAEA	2,600,302 US\$	1,285,333 US\$	80%
GPs	650,075 US\$	321,333 US\$	20%

22. Scenarios 1 and 2 require a significant amount of financial support

from the IAEA and GPs due to the high cost of both tuition fee and living cost in the developed countries. Therefore, during the pilot phase, an appropriate scholarship programme will be designed which could be feasible to having support from the IAEA to sustain the resource.

23. In case of scenario 3, in the pilot phase, the Scholarship programme will be developed firstly in focusing on the developing countries and least-developed countries. The estimated total investment cost of the RCA Scholarship for master courses is based on the scenario 3 is 881,714 US\$ (refer table 2 and Appendix 2).

**Table 2: Total Programme cost and break down of contribution by financial source for scenario 3**

Source	Amount	Share of total (%)
	Scenario 3	
IAEA	705,371 US\$	80%
GPs	176,342 US\$	20%

### **Implementation Arrangements**

24. The RCA Scholarship Committee has been established, in line with the Terms of reference (TOR) of this Committee.
25. The Chair of the RCA Scholarship Committee with RCA FP shall oversee the preparation and implementation of the programme and ensure coordination and communication with the RCA National Representatives.
26. The Committee will provide advice and recommendations to the RCA General Conference Meeting on strategic directions, plans, protocols, processes, structures, a range of issues involving scholars, scholarships, academic activities, termination, withdrawal, disciplinary matters and any other matters the Committee deems significant within its TOR.
27. The RCA Scholarship Programme Committee will develop specific guidelines and working procedures with regard to rolling out the scholarship programme, maintaining coordination and partnership with the academic institutions.

## **1. INTRODUCTION**

### **1.1 Description of RCA**

1. The Regional Cooperative Agreement for Research, Development and Training Related to Nuclear Science and Technology for Asia and the Pacific (RCA) is an intergovernmental agreement for the East Asia & Pacific region, under the auspices of the IAEA, in which the Government Parties undertake, in cooperation with each other and with the IAEA to promote and coordinate cooperative research and development (R&D) and training projects in NS&T through their appropriate national institutions.
2. Since the establishment of RCA in 1972, RCA has expanded its membership from 10 to 22 GPs to promote collaborative activities in NS&T through a number of RCA projects. Currently, there are 22 parties to the RCA, namely: Australia, Bangladesh, Cambodia, China, Fiji, India, Indonesia, Japan, Republic of Korea, Loa People's Democratic Republic Malaysia, Mongolia, Myanmar, Nepal, New Zealand, Pakistan, Palau, Philippines, Singapore, Sri Lanka, Thailand and Viet Nam.
3. The RCA aims to improve the region's socio-economic development in the fields of human health, food, agriculture, water and environment. The GPs to the Cooperative Agreement work with the IAEA to achieve this goal by sharing knowledge and expertise in the peaceful application of NS&T.

### **1.2 Current status of Human Resource Development**

4. Of all 22 Government Parties under the framework of RCA, many countries want to promote the atomic energy utilization and application for peaceful purposes that contribute to the socio-economic development. However, the most significant and well-known obstacle to the development of atomic energy applications is the lack of unattractiveness of NS&T to high-skilled human resource.
5. Furthermore, the energy crisis in the world posed a critical question about how to ensure national energy security in each GP. Some countries are considering to introduce nuclear power to their energy mix. This kind of power source is considered as one of the solutions that could sustain the socio-economic development.
6. It is well recognized that, the high-skilled nuclear workforce is the key to ensure the sustainability of GP's nuclear power programmes.

### **1.3 Overview**

7. The Regional Cooperative Agreement for Research, Development and Training Related to Nuclear Science and Technology (RCA) is an inter-governmental agreement established under the auspices of the International Atomic Energy Agency (IAEA). The RCA serves as a framework for its Government Parties (GP) to collaborate through programmes and projects focused on the specific shared needs of its members and to promote and coordinate cooperative research, development, and training projects in NS&T.
8. Strategic Direction 5 in the RCA 2018-2023 Medium-Term Strategy (MTS) states that the RCA will continue building human capacity, including provision of education and training as well as nuclear knowledge management.
9. The 43<sup>rd</sup> RCA NR Meeting held in April 2021 and the 50<sup>th</sup> RCA GCM held in September 2021 took note of the proposal to set up the RCA Scholarship Programme by the RCA Focal Person. Accordingly, the Committee of the RCA Scholarship Programme (SPS) was established to develop further details of the Scholarship Programme to be reported to the 44<sup>th</sup> NRM for its approval.
10. At the 44<sup>th</sup> RCA NR Meeting, all Government Parties (GPs) noted the benefits that the programme could bring to the region in strengthening human resources and achieving sustainable development in the field of nuclear science and technology (NS&T) and related nuclear applications. However, the Meeting agreed on the need to undertake an in-depth study of the programme before it could be launched and requested the Committee to make and submit a report on the feasibility study to the 51<sup>st</sup> GCM for consideration and decision. An announcement on the long-term aspiration of the RCA GPs for the establishment of the RCA Scholarship Programme may be made during the Ministerial Level Meeting in September 2022.
11. This Feasibility Study (FS) is carried out by the RCA Scholarship Committee chaired by Viet Nam, with the constant support and guidance from the Focal Person and experts from the IAEA.

#### **1.4. Application history**

12. Within the RCA framework, the building of the nuclear workforce has been carried out for many years under the RCA programme which has been successful in creating a sustainable network of scientists, engineers and technologists, who are well trained in the field of NS&T. However, it is a fact that technology transfer activities through RCA events have only been in the form of short-term training courses from one to two weeks. This raises the need to establish a long-term training programme in the field of NS&T and related nuclear

applications to build a high standard nuclear workforce in the Asia and Pacific region.

13. Recent reports about Human Resource Development (HRD) from several GPs have clearly shown the continuing need for HRD in the field of nuclear science and technology and related nuclear applications in the region. For instance, it is stated that in Sri Lanka, there is a lack of required skills and expertise to run a nuclear power programme safely, efficiently, and economically; therefore, capacity building and related aspects should be further enhanced [1]. It is further concluded in the report that the Sri Lanka Atomic Energy Board should be focused on the establishment of a Nuclear Power Education & Training Centre to strengthen the workforce supply and demand plan of the country's nuclear energy [1].
14. In Indonesia's presentation in the "Fukui International Meeting on Human Resource Development for Nuclear Energy in Asia" in 2019, Winarno [2] highlighted that, based on the IAEA Technical Document as reference, Human Resource Development plays an important role in the current phase of Indonesian Nuclear power program. Moreover, in the report on "Current Status, Important and Shortage of Medical Physicist in Indonesia", Pawiro [3] reported that the big issue in 2022 in Indonesia lies in the number of qualified medical physicists in advanced radiotherapy techniques. The deficit in the number of medical physicists calls for an increase in the number of candidates with a master's degree in medical physics and a continuation of the clinical residency program in the medical physics specialist field. In answer to this issue, Pawiro [3] stated that a scholarship programme for medical physicist candidates is urgently needed to pay the cost of a master's degree programme and a clinical residency programme. Additionally, Indonesia proposes to host a Master of Medical Physics program and clinical residency program for the RCA scholarship holder.
15. Furthermore, Pham [4] pointed out in his presentation at the "Fukui International Meeting on Human Resource Development for Nuclear Energy in Asia" in 2019 that although a great number of national training activities, as well as international cooperation forums, training courses and MOUs in HRD have been held and established in Viet Nam; HRD in Nuclear Power is faced with significant gaps if Viet Nam would like to return to nuclear power. Also, the lack of HRD in various aspects such as nuclear medicine, the application of radiation in industry, agriculture and so on becomes increasingly problematic.
16. It is obvious that HRD in the Asia-Pacific Region is dealing with

challenges and difficulties by way of a shortage of highly qualified nuclear workforce. As a direct result, the RCA Scholarship in the field of NS&T and related nuclear applications is an inevitable factor to improve the HRD in the region.

## **2. THE OBJECTIVE OF FEASIBILITY STUDY REPORT**

17. The objectives of the FS are to:

- (i) Determine the specific needs for postgraduate studies in NS&T in RCA GPs;
- (ii) Determine the financial resources required to meet these needs under possible scenarios depending on the number of scholarships to be awarded, and the host countries;
- (iii) Identify the availability and sources of required financial resources.

18. The task of this FS is collecting information, statistics and evidence from actual case studies in twenty-two GPs in the Asia and Pacific region through a package of questionnaires via the online survey. The information and statistics gathered will be processed to show the current demand and availability of Human Resources in the field of NS&T and related nuclear applications in the region, which will further assist to assess the viability the RCA Scholarship Programme.

## **3. RATIONALE: SECTOR PERFORMANCE, PROBLEMS, AND OPPORTUNITIES**

### **3.1 Performance Analysis**

#### **3.1.1 Overview of sector performance**

19. Education and training in the field of NS&T and related applications is critical for sustainable development in the 21<sup>st</sup> century as it creates critical thinkers, high-quality human resources, increases science literacy, and enables the next generation of innovators. Innovation leads to new products and processes that sustain economies. Innovation and science literacy depends on a solid knowledge base in the well-developed education programme. This programme provides students with a well-rounded foundation of skills to help them understand a wide range of concepts and thrive in many industries.

20. High skill education is a prerequisite for developing a workforce skilled in NS&T, which brings nuclear technology into full play in support of sustainable social and economic development.

21. The building of nuclear workforce under the RCA has been carried

out for many years, but only in the form of short regional training course (one or two weeks). For example, over the last seven years, more than eighty training courses were organized under RCA projects, which were attended by more than one thousand and nine hundred participants. Such training courses are very useful to serve specific purposes of each individual project. However, unless complemented with an education towards a higher degree and specialization, the contribution of such efforts is limited in deepening and expanding the development of the required human resources for safe, secure, and peaceful utilization of nuclear technology for sustainable development in the RCA Government Parties.

22. These training courses have contributed to improve the application capacity of NS&T in member countries through the exchange and reception of information. However, if human resources are not improved in depth and have a clear roadmap, it will be difficult to develop human resources for NS&T, ensuring the sustainable development of all members of RCA countries.
23. Therefore, it is necessary for the RCA to establish a long-term RCA Scholarship programme that serves as a solid foundation for sustainable applications of nuclear science and related technologies in member countries, especially for least-developed countries and small island countries in the region, helping them to receive maximum benefits when participating in the RCA programme.
24. Considering these factors, there is an urgent need for the RCA to establish a long-term RCA Scholarship Programme serves as a solid foundation for sustainable applications of nuclear science and related technologies in member countries, especially for LDCs and SIDSs in the region, which will enable them to receive maximum benefits when participating in the RCA programme.
25. By conducting the research survey for all RCA GPs [5], the Figure 1 clearly shows that all GPs have shown interest in the RCA Scholarship Programme and expected that this programme would be implemented.

### **3.1.2 Asia and Pacific region Context and nuclear application Development Priorities**

26. In the total of 22 RCA member countries, the availability of high-quality human resource training programmes are uneven largely due to the developed nuclear industries in both nuclear power and atomic energy applications which exist in some countries. Meanwhile, in other member states, the nuclear industry is in the process of developing. Through alignment with national strategies, appropriate

training programs have not been available in these countries.

27. Figure 2 shows that 26% of countries have no postgraduate programmes while the rest have programmes with various levels of development.

Question 1. Are you interested in developing the human resource in the field of nuclear science and technology and related nuclear applications in your country under the RCA Scholarship Programme?

19 responses

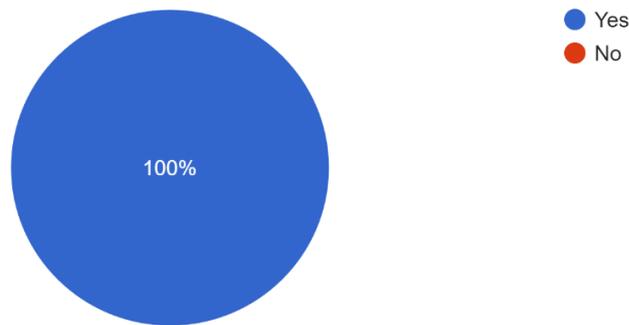


Fig. 1: Actual interest in RCA Scholarship in nuclear science and technology and related nuclear applications

Question 3. Do you have the post-graduate programme in nuclear science and technology and related nuclear applications in your country?

19 responses

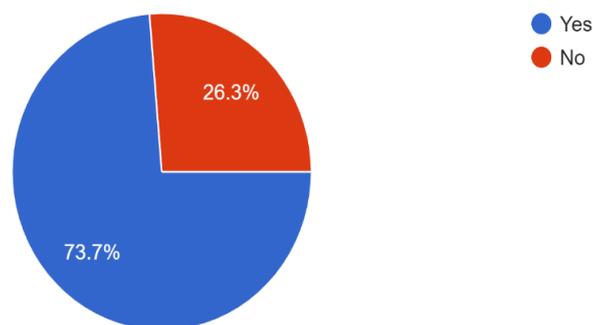


Fig. 2: Post-graduate programmes in Nuclear Science and Technology

28. Based on the results obtained from the survey, the 22 GPs can be divided into 3 groups as follows:

- **Group 1: 5 countries with well-developed postgraduate programmes:** Japan, Republic of Korea, China, Australia and New Zealand.
- **Group 2: 11 countries with developed postgraduate**

**programmes:** Thailand, Viet Nam, Indonesia, Malaysia, Philippines, Bangladesh, Pakistan, Sri Lanka, Mongolia, Singapore and India.

- **Group 3: 6 countries in the process of developing postgraduate programmes:** Laos, Cambodia, Fiji, Palau, Nepal and Myanmar.

## **3.2 Analysis of Key Problems**

### **3.2.1 Vision and reality of high quality HRD**

29. By building on its strength and directly facing its challenges, the Asia-Pacific region has the opportunity to steer a path towards future sustainability and prosperity to secure its socio-economic development. Whether the objective is to enhance its reputation as a well-serviced industrial hub, becomes a regional leader for health and education services, or merely to sustain an in-situ community that keeps pace with development and is responsive to external threats such as lack of high-skilled HRD in the field of NS&T and related nuclear applications.
30. Programmes need to be designed to attract students of high ability in the areas of NS&T in order to respond to emerging threats as identified by recipient countries. Establishing a vision for a vibrant and sustainable workforce in nuclear application and utilization makes sense not only to enhance the quality of life for existing communities but also to present an attractive face that encourages and retains a high-quality workforce along with new context of utilization of atomic energy for socio-economic development.

### **3.3.2 Inadequacy of the high quality HRD programme**

- Member states identified a lack of inadequate educational courses development to support the nuclear workforce resulting in inadequate educational courses development to support the nuclear workforce;
- In some members of RCA, the long-term training and education programmes have not been established and adapted for use by the national strategies of atomic energy utilization and development;
- A lack of strategic partnership building and engagement with the private sector for modern developments, including 'co-operation' in initial and continuing training and qualification programmes for a nuclear workforce;
- A lack of knowledge management and transfer across the HRD life cycle, as well as limited understanding of the challenges of task-based approach knowledge-based worker programme;

- Limited integrative functions to bring together private sector and education facility service quality and delivery improvements; and
  - Ineffectiveness of the training programmes in driving performance improvements and the question of ‘return on investment’ due to unclear national programme of atomic and radiation applications.
31. The figure 3 shows that, except in countries with a developed nuclear industry, it is difficult to recruit the right person for the right position.

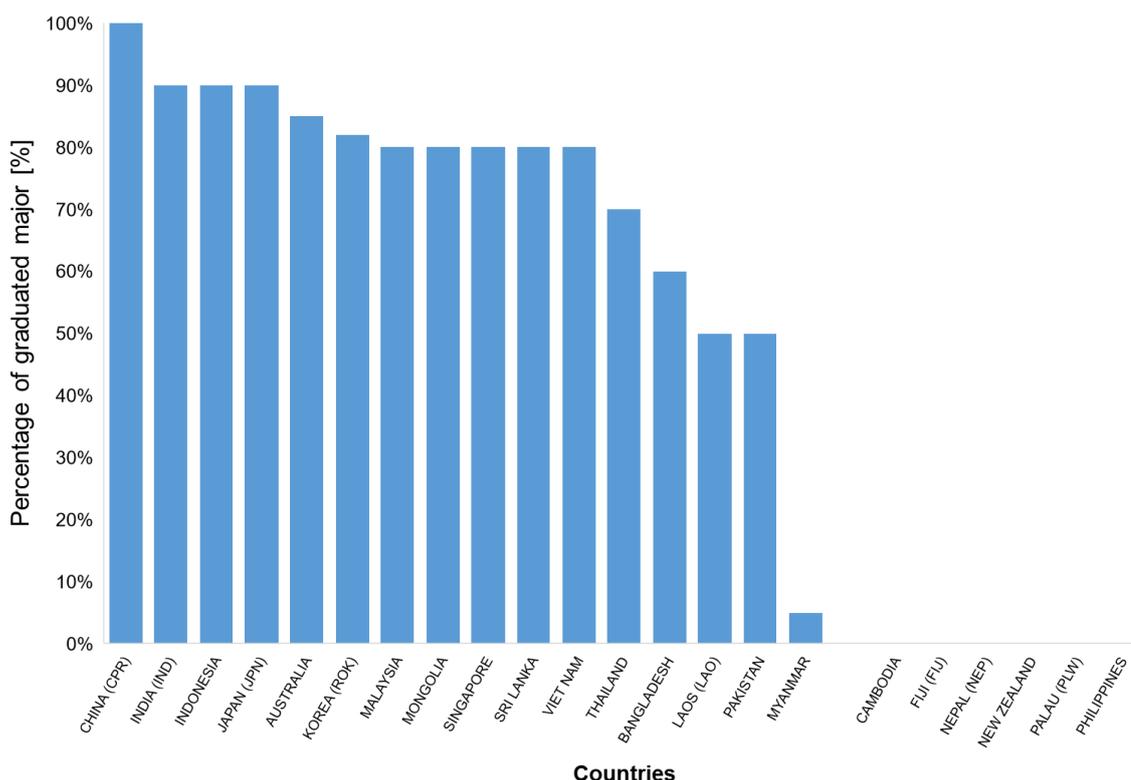


Fig. 3: The percentage of expected requirement

32. In a broader context, building an effective high quality nuclear workforce is challenging due to inadequate inter-institutional communication and collaboration, often causing the duplication or inconsistency of various functions between the market and education facilities.

### Specific issues for capability improvement

33. Through the process of conducting the survey and assessment of nuclear manpower, several specific issues emerged which are creating challenges for the RCA member countries. Key issues include:

- A lack of techniques, models and practical experiences that can be applied for workforce planning, including case studies of best

- practices and lessons learned in the workforce planning;
- Unclear planning impacting the recruitment of high-quality personnel to careers in the nuclear industry, including examples of successes and challenges that have been overcome, instruments to support ‘pipeline feeders’ and next generation links;
  - Gaps in the Recruitment and selection strategies, techniques and processes to help overcome the challenges in the current recruitment climates;
  - Lack of knowledge or guidance on “sustaining the high-quality nuclear workforce” approaches in nuclear and radiation applications;
  - Absent or outdated data and information systems that would allow better operational management of accessing the global nuclear talented personnel/students pool and multinational workforce challenges, retention strategy, techniques, and practices, including use of different employment contract models and flexible contracts that attract part-time workers and nuclear industry retirees.

### **3.3.3 Human resource development programme**

34. An integrated approach to education & training is needed to identify and meet the regional priorities and allocate resources accordingly. The approach should also be integrated with workforce planning and other key HR activities and requires a long-term planning horizon.
35. Given the priority of the programme to recognize the important role of high-quality HR but also need to understand that this is cyclical in terms of HR management.
36. Early establishment of training programmes is essential, including nuclear familiarization programmes.
37. The figure 4, 5 and 6 show that the number of postgraduates is limited, especially in developing countries and small countries.

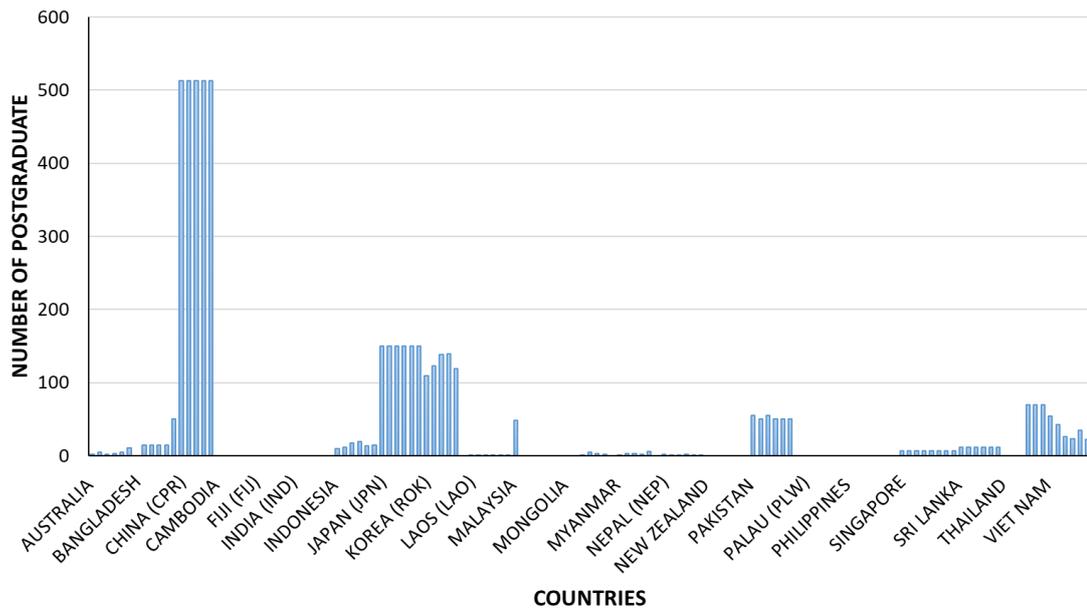


Fig. 4: Number of postgraduates graduated from 2016-2021

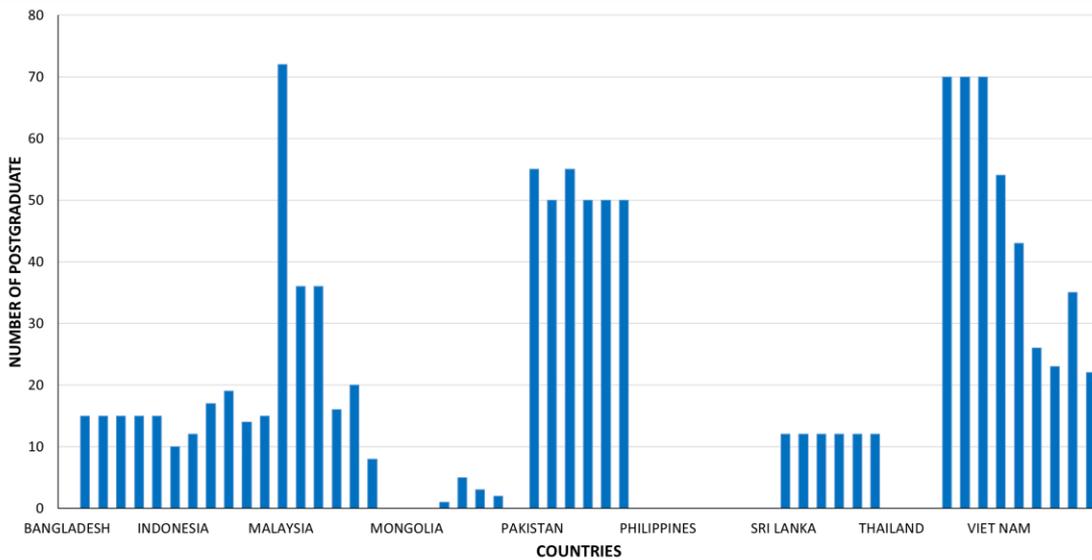


Fig. 5: Number of postgraduates during 5 years (2016-2021) in developed postgraduate programmes

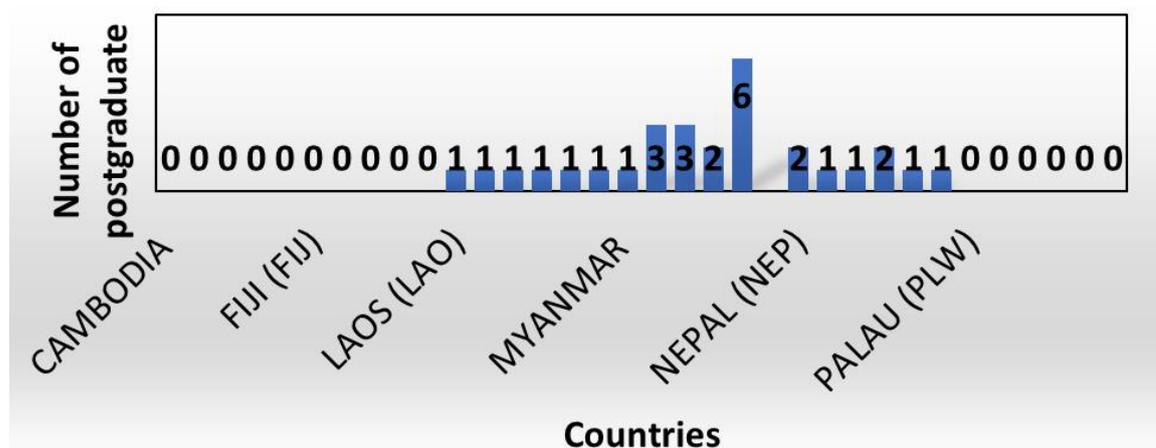


Fig. 6: Number of postgraduates during 5 years (2016-2021) in developing postgraduate programmes

### 3.3 Development opportunities of RCA Scholarship programme

38. With the objectives of supporting HRD, the RCA Scholarship Programme implement a vision to strengthen nuclear workforce prospects in the RCA GPs while becoming more attractive to talented students and reducing the risk of losing experienced workforce.
39. These objectives are consistent with the Mid-term strategy of 2018-2023 period which requires the integration of research projects and exchange information between developed countries and developing countries in NS&T and related nuclear applications under the RCA framework.
40. The proposed RCA Scholarship Programme is consistent with IAEA's increased emphasis on the utilization of atomic energy for peaceful purposes as discussed at the 50<sup>th</sup> RCA General Conference Meeting (RCA GCM) held during 16-17 September 2021, when the proposal to establish the RCA Scholarship Programme was presented. The 1<sup>st</sup> Meeting of the RCA SPS Committee was held on 25<sup>th</sup> January 2022.
41. Funding support for the capacity development aspects of the RCA Scholarship programme was proposed at the 44<sup>th</sup> RCA Regional Meeting of National RCA Representatives which was held virtually on 19-21 April 2022. This grant fund project, implemented in cooperation with IAEA, has the objectives to increase the number of highly qualified human resource working on NS&T and related nuclear application subjects. This programme will help to improve and strengthen the skills of the high-quality nuclear workforce while reducing the loss of specialists, to provide support for policy and strategic dialog and projects related to utilization of atomic energy for peaceful purposes in RCA's GPs.

## **4. THE PROPOSED RCA SCHOLARSHIP PROGRAMME**

### **4.1 Design of RCA Scholarship programme.**

42. The proposed RCA Scholarship Programme would be established with the fundamental aim of developing a workforce skilled in NS&T and acting as a solid platform and the backbone for the sustainable applications of NS&T in RCA GPs, especially for the Least Developed Countries (LDCs) and the Small Island Developing States (SIDSs).
43. The overall objective is to support sustainable socio-economic development in RCA GPs through the RCA Scholarship Programme in NS&T and related nuclear applications for the advancement of highly qualified human resources at the level of master's degree. Additionally, the initial plan (pilot phase) will focus on domestic/national training in countries having master's curriculum in NS&T and related nuclear applications.
44. In the 1<sup>st</sup> phase, the Programme is to be piloted for an initial period of three (3) academic years with its continuity subject to the results of a review on delivery of its objectives after the pilot period. After reviewing, this RCA Scholarship Programme could expand to bigger scale in 2<sup>nd</sup> phase. For instance, RCA Scholarship Programme will open for doctoral course and international exchange programme.
45. In case of the RCA's GPs who do not have or least-developed educational programme in the field of NS&T and related applications, the RCA Scholarship Programme will conduct the sub-regional cooperation. That means the developed countries which has postgraduate programme will support to host those GP.
46. The proposed programme in long-term would target about 1000 RCA Scholarships to be awarded by 2032 (when the RCA turns 60<sup>th</sup> anniversary). This equates to 100 scholars per year or at least 5 scholars per RCA GP will be supported each year for the next 10 years. The scholarship award is assessed based on the academic qualifications and the acceptance letter issued by the partner universities in the RCA State Parties.
47. Award is granted through an application and merit selection process to academically deserving candidates who are accepted in an academic programme in partner universities listed by the RCA.
48. Scholarship shall be for one school year at a time, with up to a maximum of 2 years to successful completion of master's programme, then will be renewable subject to the recipient's satisfactory completion of the requirements of the scholarship and

the selected academic programme.

49. The admission fee, 2-year tuition fee, allowance and living cost will be covered by this scholarship based on the IAEA financial regulation in each country.
50. The RCA aims to establish a long-term programme for education and training that acts as a solid platform and the backbone for the sustainable applications of nuclear and science technology and related application in RCA GPs.
51. Based on the results of the feasibility study, a HRD TC Project may be developed for the management and implementation aspects of the RCA Scholarship Programme in accordance with the RCA procedures stipulated in the RCA GOR.
52. Based on the existing nuclear science and technology education and training programmes available in each RCA GP, the RCA scholarship programme may be developed with three following scenarios:
  - 4.1.2 Scenario 1:** Ensuring the participation of all GPs. The RCA Scholarship Programme will be implemented for all countries with domestic training approach.
  - 4.1.3 Scenario 2 and 3:** In the pilot phase, this RCA Programme will be focused on the 16 countries with developed postgraduate programme while supporting the countries with least-developed postgraduate programmes.
53. The scenarios 2 and 3 are designed to improve the high-skilled qualified nuclear workforce in developing countries and the countries with least-developed postgraduate programmes. Both scenario 2 and 3 will help to narrow the gap of human resource between these countries and developed countries while optimizing the mobilized resource.
54. Both scenario 2 and 3 will make a greater impact for developing and least-developed countries.

## **4.2 Outputs**

55. The programme has the following three outputs:
  - Output 1:** Enhance capacity for highly skilled education and training in the field of NS&T and related nuclear applications;
  - Output 2:** Enhance collaboration and exchange in research and education of each GP;
  - Output 3:** Support for programme and education curriculum in NS&T and related nuclear application through RCA Scholarship.

#### **4.2.1 Output 1: Enhance capacity for highly skilled humans in the field of NS&T and related nuclear application**

56. To enhance capacity in research of GPs by collaboration between R&D organization, industry, and education facility/university in the field of NS&T and related nuclear applications.
57. To encourage and attract talented students studying in the field of NS&T and related nuclear applications.
58. To ensure the highly qualified human resources at the level of Master's degree.
59. To compensate the number of experts who will be retired to ensure the cycle training/education life

#### **4.2.2 Output 2: Enhance collaboration in research, education and training of each GP**

60. To share the mutual expectation on the atomic energy utilization and application for peaceful purposes.
61. In line with the implementation of RCA Scholarship, the GP will have opportunities to communicate frequently that allow to improve the collaboration and exchange information under the RCA framework.
62. To create the platforms where the interested data could be opened and shared among the GPs.
63. To create a forum where the experts from the developed countries could exchange the expertise and knowledge to the developing country through the giving lectures for postgraduate programme under the RCA Scholarship.

#### **4.2.3 Output 3: Support for programme and education curriculum in nuclear science and technology and related nuclear application through RCA Scholarship**

64. By developing the consolidated RCA Scholarship programme, a network of educators and trainers is established which, in turn, will allow to create a foundation to contribute to establishing national education programme in the field of NS&T and related nuclear applications.

### **4.3 Impact and Outcome**

65. The RCA Scholarship will assist the member states of RCA to:
  - (i) Increase attractiveness of students applying to the field of nuclear application and reduce lack of number of experts retirement;
  - (ii) Improve quality of education and training;

- (iii) Enhance educational conditions through promoting collaboration and exchange in the field sub-regionally and internationally, and
- (iv) Strengthen the capacity in the field in response to lack/leak of expertise.

66. The impact of the RCA Scholarship Programme will improve highly skilled HRD in the field of NS&T and related application and education and training infrastructure in the member states of RCA.

67. The graduated students will strongly contribute to build up the postgraduate programme in their countries

68. The outcome will contribute to socio-economic development and competitiveness of atomic energy utilization for peaceful purposes.

#### **4.4 Special Features of programme**

69. To develop the programme, an integrated approach has been taken to achieve multiple objectives to modernize the technology and investments that are appropriate and practical.

70. The programme features the following:

- (i) Demonstration of a practical implementation of RCA Scholarship;
- (ii) Integrated RCA Scholarship programme initiatives that seek to combine various objectives for the benefit of improving appearance and the look of the high-quality nuclear workforce. Through investment in the scholarship programme and the enhanced research capability of each country.
- (iii) The pilot programme of three years demonstrates a functioning RCA Scholarship management approach based on the principles of Scholarship award. Coupled with training and awareness raising to promote the value of high-quality training methodology, the construction of a pilot Scholarship implemented by RCA Scholarship Committee will provide opportunities to identify the practical issues for design and implementation issues as well as raise public awareness.
- (iv) Promotion of practical approaches to capacity building that emphasizes learning-by-doing and measures success through results-based criteria.
- (v) Demonstration that it is possible to combine robust and stable high quality nuclear workforce with resource mobilization to enhance visual appeal.

## 4.5 RCA Scholarship resource mobilization plan

71. To develop the programme, the initial cost estimate has received considerable attention from GPs. The figure 7 shows the average of education cost for 2-year master course in each country. The resource mobilization will be prepared by 03 scenarios outline below:

**4.5.1 Scenario 1:** RCA Scholarship will be implemented for all GPs by awarding 6 scholarship awards/country/year. In total, there will be 115 awards for all GPs according to the scale of HRD of each member state.

**4.5.2 Scenario 2:** GPs will be divided into 2 groups: Group 1 is the resource countries (6 countries: Japan, Republic of Korea, China, Australia, New Zealand and Singapore). Group 2 comprises the target countries and least-developed countries (16 countries). In total, there will be 84 awards/year/GPs.

**4.5.3 Scenario 3:** GPs will be divided into 2 groups: Group 1 is the resource countries (6 countries: Japan, Republic of Korea, China, Australia, New Zealand and Singapore). Group 2 is the target countries and least-developed countries (16 countries). The number of awards is scaled down to 42 awards/year/GPs in Group 2.

**Table 1: The postgraduate programme in GPs**

No.	Country	Postgraduate Programme		Proposal
1	AUSTRALIA (AUL)	Yes		Resource country Support for Fiji
2	BANGLADESH (BGD)	Yes		Implement the domestic training
3	CHINA (CPR)	Yes		Resource country
4	CAMBODIA (KAM)			Vietnam support
5	FIJI (FIJ)		No	Australia support
6	INDIA (IND)	Yes		Support for Nepal
7	INDONESIA (INS)	Yes		Implement the domestic training and support Palau
8	JAPAN (JPN)	Yes		Resource country

9	<b>KOREA (ROK)</b>	Yes		Resource country
10	<b>LAOS (LAO)</b>	Yes		Vietnam support
11	<b>MALAYSIA (MAL)</b>	Yes		Implement the domestic training
12	<b>MONGOLIA (MON)</b>	Yes		Implement the domestic training
13	<b>MYANMAR (MYA)</b>	Yes		Thailand support
14	<b>NEPAL (NEP)</b>		No	India support
15	<b>NEW ZEALAND (NZE)</b>	Yes		Resource country
16	<b>PAKISTAN (PAK)</b>	Yes		Implement the domestic training
17	<b>PALAU (PLW)</b>		No	Indonesia support
18	<b>PHILIPPINES (PHI)</b>		No	Thailand support
19	<b>SINGAPORE (SIN)</b>		No	Resource country
20	<b>SRI LANKA (SRL)</b>	Yes		Implement the domestic training
21	<b>THAILAND (THA)</b>	Yes		Implement the domestic training
22	<b>VIET NAM (VIE)</b>	Yes		Implement the domestic training

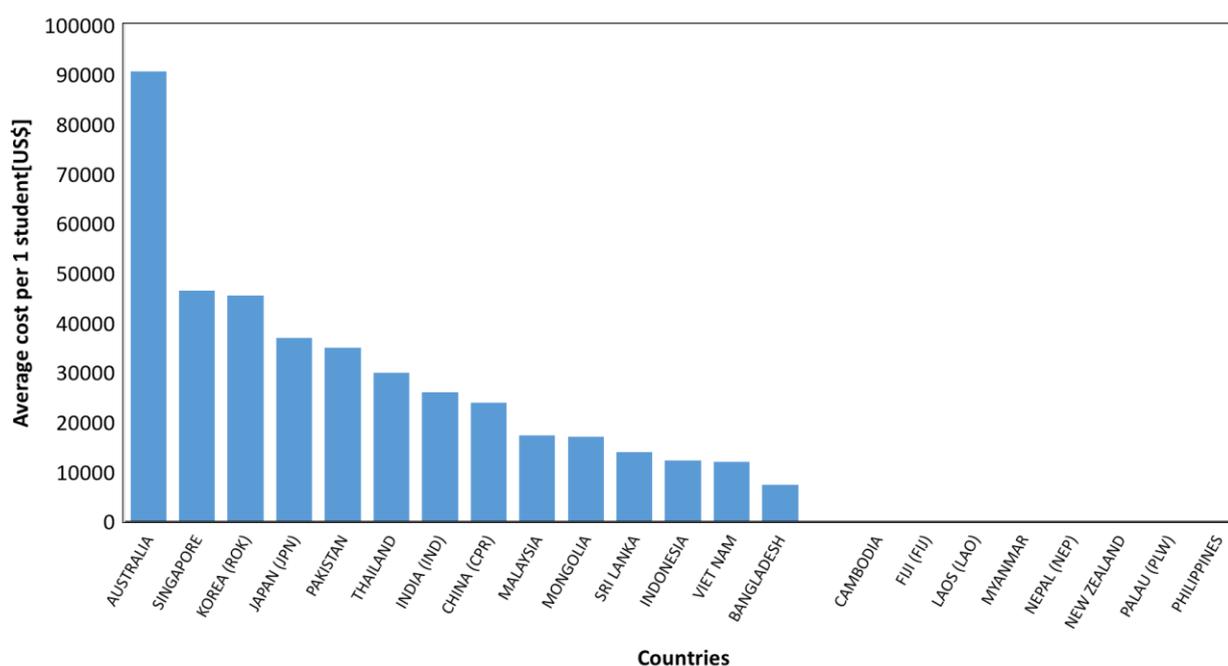


Fig. 7: Average cost for one student studying for a 2-year Master course in each GP

### 4.6 Financing plan

- 72. This section summarizes the mobilization resource to sustain the RCA Scholarship Programme.
- 73. The estimated total investment cost of the RCA Scholarship for master courses is based on the scenarios 1 and 2 as mentioned above which are 3,250,378 US\$ and 1,606,668 US\$, respectively (Refer to Table 2 and Appendix 1 ).
- 74. The RCA Programme uses two different sources of capital: IAEA support and in-kind contribution from each GPs as shown in Table 1.
- 75. The in-kind contribution is understood as utilization of education facilities such as classrooms, experimental apparatus and lecturers.
- 76. The current understanding is that IAEA will provide a financial support of 80% of RCA Scholarship Programme for the pilot phase and the other contributions will be allocated by in-kind contribution or Extra-budgetary in term of donation from the GPs up to 20%.
- 77. Both scenarios 1 and 2 require significant financial support from IAEA and GPs due to the high cost of both tuition fee and living cost in the developed countries. Therefore, during the pilot phase, an appropriate Scholarship programme will be designed to be feasible with support from IAEA to sustain the resource.
- 78. In scenario 3, during the pilot phase, Scholarship programme will be developed firstly in focusing the developing countries and least-developed countries. The estimated total investment cost of the RCA Scholarship for master courses is based on the scenario 3 as mentioned below which is 881,714 US\$ (refer table 3 and Appendix 2).

Question 11. For the first three year pilot, the RCA Scholarship programme will be set up with financial support from IAEA, up to 80% and 20% fr...ncial contribution to this Scholarship Programme?  
19 responses

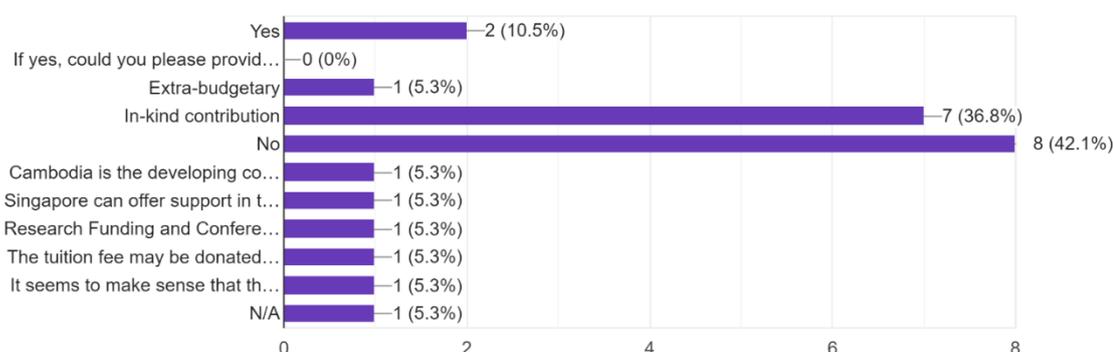


Fig. 8: Financial contribution in RCA GPs

**Table 2: Total Programme cost and break down of contribution by financial source for scenario 1 and 2**

Source	Amount		Share of total (%)
	Scenario 1	Scenario 2	
IAEA	2,600,302 US\$	1,285,333 US\$	80%
GPs	650,075 US\$	321,333 US\$	20%

**Table 3: Total Programme cost and break down of contribution by financial source for scenario 3**

Source	Amount	Share of total (%)
	Scenario 3	
IAEA	705,371 US\$	80%
GPs	176,342 US\$	20%

79. It can be understood that the IAEA will develop a HRD TC Project to sustain the RCA Scholarship Programme budget for a 3-year pilot.

## **5. IMPLEMENTATION ARRANGEMENTS**

80. The RCA Scholarship Committee will be the Programme Executing Organization.

81. Following with the establishment of Scholarship Committee, the Terms of Reference (TOR) of the Committee will be developed. In order to ensure the continuity of the scholarship implementation, the term of the Chair of the Committee is five (5) years.

82. The RCA Scholarship Programme Committee will develop specific guidelines and working procedures with regards to rolling out the scholarships programme, maintaining coordination and partnership with the academic institutions including the following:

- (i) Develop qualification requirements and eligibility criteria for candidates;
- (ii) Identify and recommend academic institutions and solicit scholarship facilities and pledges;
- (iii) Assist in establishing the network of a consortium of universities and academic institutions;

(iv) Assist in developing practical arrangements between the RCA, the IAEA, and Universities or academic institutions;

83. The proposal of guideline is referred to Appendix 3.

84. The main roles and responsibilities of the various parties are set out in Table 4.

**Table 4: RCA Scholarship implementation arrangements**

<b>Programme implementation organization</b>	<b>Management Roles and Responsibilities</b>
IAEA and RCA GP	<ul style="list-style-type: none"> <li>- Authority for decisions on investment</li> <li>- Ensure the strong ownership of the RCA Scholarship Programme</li> </ul>
RCA Scholarship Committee	<ul style="list-style-type: none"> <li>- Provide overall guidance and strategic decisions for the Scholarship implementation</li> <li>- Provide the comments and assessment of application documents, when relevant</li> <li>- Participate in the Steering Committee via supervision missions</li> <li>- Ensure close communication with the recipients</li> </ul>
IAEA and NR's GPs of RCA	Overall responsibility for the programme preparation and implementation in each GPs.
Secretariat of RCA Scholarship Committee	<p>The Secretariat of RCA Scholarship Committee with the RCA FP shall oversee the preparation and implementation of the programme and ensures coordination and communication with the NRs. Main responsibilities in the role of Secretariat are as followed:</p> <ul style="list-style-type: none"> <li>• Manage procurement procedures, and implementation and quality control of scholarship award;</li> <li>• Perform the financial management and monitor safeguard measures and</li> </ul>

	<p>provide routine reporting.</p> <ul style="list-style-type: none"> <li>• Establish coordination groups and RCA Scholarship Committee members to coordinate works of the programme and stakeholders</li> </ul>
	<p>Coordinate and supervise the implementation of the programme including:</p> <ul style="list-style-type: none"> <li>• Decide major strategic issues in the Programme;</li> <li>• Establish technical working groups and define their functions and mandates;</li> <li>• Decisions relating to technical groups and counterpart personnel.</li> </ul>
<p><b>National RCA Scholarship coordination and contact point</b></p>	<p>To be established to coordinate technical issues for the RCA Scholarship programme the working groups will:</p> <ul style="list-style-type: none"> <li>• Provide advice and comment on specific technical areas of the Programme</li> <li>• Coordinate the RCA Scholarship application.</li> </ul>

## 6. PROGRAMME RISKS

85. Major risks and mitigation measures are presented in the table below.

**Table 5: Summary of Risks and Mitigation Measures**

Risk	Mitigation measures
<p>The risk for financial support to keep the scholarship continuing for 2-3 years (reduction, suspend, stop, etc.)</p>	<p>The commitment for financial contribution among involved parties shall be established, including detailed information on the amount, duration, and forms of contribution.</p>

<p>The multiplicity and diversity of financial sources of cooperation will be beneficial - in practice for a scholarship programme, however, there is a risk that the outcome will be otherwise (inability to rationalize finance to regulation, etc.).</p>	<p>Effective financial support coordination is essential to ensure that the RCA scholarship programme remains focused on the right priorities, avoids duplication, and takes the absorption capacity within selected universities and candidates into account.</p>
<p>The risks related to the legality and regularity of the financial operation, considering the multiannual character of the activities.</p>	<p>The selected universities shall operate an accounting system that provides accurate, complete, reliable, and timely information. The selected candidates shall also reasonably protect data enabling the identification of a natural person (personal data).</p>
<p>The risks are related to overrunning/overexpenses of the grant foreseen for the activity implemented by the selected universities and candidates.</p>	<p>The selected universities and candidates shall immediately inform the RCA Scholarship Committee and seek its approval for the corrective activities planned to address the overexpense and propose measures to mitigate.</p> <p>Estimation for the contingency cost due to fluctuations in economic and social conditions shall be made.</p> <p>Typically, an 8-10% calculation of the budget should be allocated to contingency.</p>

## 7. CONCLUDING REMARKS

86. The main objective of RCA Scholarship Programme is to promote a vision to strengthen high human quality nuclear workforce prospects in the RCA GPs while improving and encouraging the attractiveness

of talented students and reducing leak of manpower risk. The main contribution of the RCA Scholarship Programme will be:

- 1) To enhance and improve the capacity in research of GPs by collaboration between R&D organization, industry and education facility/university in the field of NS&T and related nuclear applications;
  - 2) To encourage and attract talented students studying in the field of NS&T and related nuclear applications;
  - 3) To create a platform in sharing the mutual expectation on the atomic energy utilization and application for peaceful purposes; and
  - 4) To ensure the sustainable of the socio-economic development by using atomic energy for peaceful purposes.
87. By considering the objectives of RCA Scholarship Programme and the resource mobilization, this Programme is feasible to be implemented under the framework of RCA during the pilot phase.

**APPENDIX 1: ESTIMATED COST OF RCA SCHOLARSHIP FOR SCENARIO 1 and 2**

Country	Average cost / student	Number of students scenario 1	Cost scenario 1	Number of students scenario 2	Cost scenario 2	Notice
AUSTRALIA	90,714	6	725,712	0	0,00	support 2 Fiji students
BANGLADESH	7,333	6	44,000	6	44,000	
CHINA (CPR)	24,000	6	144,000	0	0,00	
CAMBODIA	N/A	6	0,00	6	0,00	Vietnam supports 6 students
FIJI (FIJ)	N/A	2	0,00	2	0,00	Australia support 2
INDIA (IND)	26,000	6	208,000	6	208,000	support 02 Nepalese students and 6 Indian students
INDONESIA	12,333	6	98,666	6	98,666	support 2 Palau student
JAPAN (JPN)	37,000	6	222,000	0	0,00	
KOREA (ROK)	45,500	6	273,000	0	0,00	
LAOS (LAO)	N/A	6	0,00	6	0,00	Vietnam support 6 Laos students
MALAYSIA	17,333	6	104,000	6	104,000	
MONGOLIA	17,000	6	102,000	6	102,000	
MYANMAR	N/A	6	0,00	6	0,00	Thailand support 6 Myanmar students
NEPAL (NEP)	N/A	3	0,00	2	0,00	
NEW ZEALAND	N/A	0	0,00	0	0,00	

<b>PAKISTAN</b>	35,000	6	210,000	6	210,000	
<b>PALAU (PLW)</b>	N/A	2	0,00	2	0,00	Indonesia supports 2 Palau students
<b>PHILIPPINES</b>	N/A	6	0,00	6	0,00	Thailand supports 6 Philippine students
<b>SINGAPORE</b>	46,500	6	279,000	0	0,00	
<b>SRI LANKA</b>	14,000	6	84,000	6	84,000	
<b>THAILAND</b>	30,000	6	540,000	6	540,000	Support 6 Philippine students and 6 Myanmar students
<b>VIET NAM</b>	12,000	6	216,000	6	216,000	Support 6 Laos students and 6 Cambodia students
	<b>SUM</b>	<b>115</b>	<b>3,250,378 US\$</b>	<b>84</b>	<b>1,606,666 US\$</b>	

**APPENDIX 2: ESTIMATED COST OF RCA SCHOLARSHIP FOR SCENARIO 3**

<b>Country</b>	<b>Average cost/ student (in US\$)</b>	<b>Number of students Scenario 3</b>	<b>Cost for Scenario 3 (in US\$)</b>	<b>Notice</b>
<b>AUSTRALIA</b>	90,714	0	90,714	Support 1 Fiji student
<b>BANGLADESH</b>	7,333	3	22,000	
<b>CHINA (CPR)</b>	24,000	0	0,00	
<b>CAMBODIA</b>	N/A	3	0,00	Vietnam supports 3 students
<b>FIJI (FIJ)</b>	N/A	1	0,00	Australia supports 1 student
<b>INDIA (IND)</b>	26,000	3	104,000	Support 1 Nepalese student
<b>INDONESIA</b>	12,333	3	37,000	Support 1 Palau student
<b>JAPAN (JPN)</b>	37,000	0	0,00	
<b>KOREA (ROK)</b>	45,500	0	0,00	
<b>LAOS (LAO)</b>	N/A	3	0,00	Vietnam supports 3 students
<b>MALAYSIA</b>	17,333	3	52,000	
<b>MONGOLIA</b>	17,000	3	51,000	

<b>MYANMAR</b>	N/A	3	0,00	Thailand supports 3 students
<b>NEPAL (NEP)</b>	N/A	1	0,00	
<b>NEW ZEALAND</b>	N/A	0	0,00	
<b>PAKISTAN</b>	35,000	3	105,000	
<b>PALAU (PLW)</b>	N/A	1	0,00	Indonesia supports 1 student
<b>PHILIPPINES</b>	N/A	3	0,00	Thailand supports 3 students
<b>SINGAPORE</b>	46,500	0	0,00	
<b>SRI LANKA</b>	14,000	3	42,000	
<b>THAILAND</b>	30,000	3	270,000	Thailand supports 3 Philippine students and 3 Myanmar students
<b>VIET NAM</b>	12,000	3	108,000	Vietnam supports 3 Laotian students and 3 Cambodian students
	<b>SUM</b>	<b>42</b>	<b>881,714 US\$</b>	

**APPENDIX 3: GUIDELINE of RCA SCHOLARSHIP  
PROGRAMME For Master's Degree Course**

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## **2022 RCA Scholarship Programme for Master's Degree**

### **1. Overview**

1. The RCA Scholarship Programme would be established with the fundamental aim of developing a workforce skilled in NS&T and acting as a solid platform and the backbone for the sustainable applications of NS&T in RCA GPs, especially for the Least Developed Countries (LDCs) and the Small Island Developing States (SIDSs).
2. The overall objective is to support sustainable socio-economic development in RCA GPs through the RCA Scholarship Programme in NS&T and related nuclear applications for the advancement of highly qualified human resources at the level of master's degree. Additionally, the initial plan (pilot phase) will focus on domestic/national training in countries having master's curriculum in NS&T and related nuclear applications.
3. In the 1<sup>st</sup> phase, the Programme is to be piloted for an initial period of three (3) academic years with its continuity subject to the results of a review on delivery of its objectives after the pilot period. After reviewing, this RCA Scholarship Programme could expand to bigger scale in 2<sup>nd</sup> phase. For instance, RCA Scholarship Programme will open for doctoral course and international exchange programme.
4. In case of the RCA's GPs who do not have or least-developed educational programme in the field of NS&T and related applications, the RCA Scholarship Programme will conduct the sub-regional cooperation. That means the developed countries which has postgraduate programme will support to host those GP.
5. The proposed programme in long-term would target about 1000 RCA Scholarships to be awarded by 2032 (when the RCA turns 60<sup>th</sup> anniversary). This equates to 100 scholars per year or at least 5 scholars per RCA GP will be supported each year for the next 10 years. The scholarship award is assessed based on the academic qualifications and the acceptance letter issued by the partner universities in the RCA State Parties.
6. Award is granted through an application and merit selection process to academically deserving candidates who are accepted in an academic programme in partner universities listed by the RCA.
7. Scholarship shall be for one school year at a time, with up to a maximum of 2 years to successful completion of master's

programme, then will be renewable subject to the recipient's satisfactory completion of the requirements of the scholarship and the selected academic programme.

8. The admission fee, 2-year tuition fee, allowance and living cost will be covered by this scholarship based on the IAEA financial regulation in each country.
9. The RCA aims to establish a long-term programme for education and training that acts as a solid platform and the backbone for the sustainable applications of nuclear and science technology and related application in RCA GPs.

## 2. Qualification for Applicants

10. Applicants should have a Bachelor's Degree or a degree equivalent to a Bachelor's Degree (or above), those with academic background and or working experience in nuclear and radiation engineering, management, or other relevant fields are preferred and be under the age of 35.
11. Applicants should be a citizen of an eligible country (Asia Pacific region) in good health and character, be well behaved.
12. Applicants must have a certain level of English language proficiency and are able to complete full English program.
13. Applicants is recommended by the National RCA Representative of his/her country by asking the Representative to notify the candidate's name by email/official letter (format is available) to the Programme coordinator of the RCA Scholarship at [iaea-rca-sps@vinatom.gov.vn](mailto:iaea-rca-sps@vinatom.gov.vn) (to be created) or by fax to +84-(024) 39422625.

## 3. How to apply RCA Scholarship

14. The applicant must provide the **Acceptance for Admission of Master's course** and a Recommendation letter from the University or Academic Institution to the RCA Scholarship Programme Committee. Then, the Committee will review the interested candidates for the Scholarship.
15. Timeline for application includes four (4) steps as below:



16. **Step 1 - Online Application:** Applicants must complete the Online Application on the IAEA RCA admission website (<https://rcaro.org/rca-sps/admission>). Applicants need to fill in the application information online, upload the application documents listed below to the online application system, and pay the application fee online at the time of submission.

17. After finishing the online application, the application ID and password must be informed to the Program coordinator ([iaea-rca-sps@vinatom.gov.vn](mailto:iaea-rca-sps@vinatom.gov.vn)) at least 2 days before the deadline so that admission fee can be paid by RCA programme.

18. **Step 2- Document Review:** Applicants should send their application package directly to RCA Scholarship Programme office/team by the due date (Address is given below). The RCA Scholarship Programme office/team shall not take any responsibility for a failure in delivery of application documents by the deadline. Submitted documents will NOT be returned in any case. Please keep a copy of all application materials in case the materials get lost in the mail.

- RCA Scholarship Programme Coordination Information

Name: **Dr. Chi Thanh TRAN**

National RCA Representative of Vietnam

Chairperson of RCA Scholarship Programme Committee

Occupation: President of VINATOM

Mailing Address: 59 Ly Thuong Kiet Street, Hoan Kiem district, Hanoi, Vietnam

Email: [iaea-rca-sps@vinatom.gov.vn](mailto:iaea-rca-sps@vinatom.gov.vn)

Tel.: +84-(024) 39422756 – Fax: +84-(024) 39422625

Application due date: Day    Month, 2023

**Postal Address**

RCA Scholarship Programme OFFICE,

Nuclear Training Center

Vietnam Atomic Energy Institute

140 Nguyen Tuan Street, Thanh Xuan District, Hanoi

[iaea-rca-sps@vinatom.gov.vn](mailto:iaea-rca-sps@vinatom.gov.vn)

Tel.: +84-(024) 39422756 – Fax: +84-(024) 39422625

19. Applications shall be reviewed according to the following criteria and in coordination with the focal points from the academic institution (university):
- 1) 50% - academic performance, based on the average grade for the previous two (2) semesters;
  - 2) 30% - leadership, based on quality and quantity of involvement in extracurricular activities; and
  - 3) 20% - written essay.
20. **Step 3 - General and in-depth Interview:** based on the above evaluation results, a selected number of applicants will be interviewed by RCA Scholarship Programme Committee.
21. **Step 4 - Announcement of Final Decision:** to the applicants who pass the evaluation based on the following criteria:
- 1) 80% - weighted score of the first pass evaluation (i.e., first pass score x 0.80)
  - 2) 20% - interview results
22. **NOTE:** In case, a scholarship recipient withdraws from the scholarship during the term of the scholarship, the benefits will be terminated immediately, and the benefits are awarded to another candidate, starting from the succeeding semester.
23. A withdrawal should be submitted in writing to the RCA Scholarship Programme Committee. A notice of acceptance of the withdrawal and termination of benefits will be sent to the scholar within one week of receipt of the withdrawal advice.

## **4. RCA Scholarship Programme**

### **4.1 Scholarship Benefits**

24. Admission free and 2 years Master tuition free will be covered by this scholarship based on the IAEA financial regulation in each country.

25. Allowance and living cost will be paid by RCA Scholarship Programme based on the IAEA financial regulation in each country.
26. Monthly living and other allowances will be paid monthly to the scholar on the 1<sup>st</sup> day of each month through an appropriate mechanism established by RCA Scholarship Programme.
27. In addition to the degree awarded by the University or Academic institution after completing the course, the candidate will be certified of joining this RCA scholarship programme between the University or Academic institution, The International Atomic Energy Agency (IAEA and the RCA Scholarship Committee).

#### **4.1.1 National training**

25. RCA Scholarship Programme will strongly support the National Training in each GP for Master Programme if they have postgraduate programme in NS&T and related applications.

#### **4.1.2. International training**

28. In case of the RCA's GPs who do not have or least-developed educational programme in the expected fields, the RCA Scholarship Programme will conduct the sub-regional cooperation. The sub-regional coordination shall be established as follows:
  - 1) Thailand support Philippine and Myanmar
  - 2) Vietnam will support Laos, Cambodia
  - 3) Australia and New Zealand will support Fiji
  - 4) Indonesia will support Palau
  - 5) India will support Nepal

#### **4.1.3. Travelling expenses**

29. **Transportation to the Host University:** RCA Scholarship Programme will stipulate the travel schedule and route, and provides an airline ticket to grantees who will arrive host universities/Academic institution.
30. The airline ticket will be an economy-class ticket for the flight from the international airport closest to the grantee's residence (in principle, the country of nationality) to an international airport in host country to the accepting university.
31. The grantee shall bear at his/her own expense all costs related to domestic travel from the grantee's residence to the nearest international airport, airport taxes, airport usage fees, special taxes necessary for travel.

32. **Transportation from Domestic:** Based on the application by the grantee, RCA Scholarship Programme will provide an airline ticket to grantees who shall graduate the accepting university and return to the home country by the end of the final month of the period of scholarship designated by RCA Scholarship Programme. RCA Scholarship Programme shall provide an economy-class airline ticket from the international airport in Host university or Academic Institution used for the normal route to and from the accepting university to the international airport (in principle, in the country of nationality) nearest to the returning grantee's residence.
33. The grantee shall bear at his/her own expense all costs related to travel from the grantee's residence in Host university or Academic Institution to the nearest international airport, airport taxes, airport usage fees, special taxes necessary for travel, travel expenses within the country of nationality (including airline transit costs), travel insurance expenses, carry-on luggage or unaccompanied baggage expenses, etc.
34. If a grantee returns to the home country before the end of period of scholarship due to personal circumstances, or reasons stated in "**7. SUSPENSION OF PAYMENT OF SCHOLARSHIP**", **RCA Scholarship Programme** will not pay for the returning travel expenses.
35. If a grantee continues to stay in Host university or Academic Institution after the scholarship period has ended (ex. proceeding to further education or being employed in the Host university or Academic Institution, continuing to register at the university), travel expenses for a temporary return will also not be paid.

#### **4.2 Duration of scholarship**

36. The duration of RCA Scholarship is 1,5-2 years depending on the Master's course programme in each univerisy or Academic Institution.

#### **5. Application Documents**

37. Please upload all the listed documents below to the online application and admission system:
- (1) **Application form.** The application form should be filled out in accordance with the requirements of IAEA template;
  - (2) **Degree certificate:** Applicants should submit their Bachelor's degree. Applicants who will not graduate before the application deadline shall provide the expected graduation certificate first, and

the degree diploma must be submitted before registration

- (3) **Academic transcript:** Applicants with Bachelor's Degree should submit the academic transcript of graduate study. Applicants who will not graduate before the application deadline must provide their current academic transcript. In this case, the completed academic also advised to submit the transcript of either TOEFL (the test of English as a foreign language) or IELTS (international English language testing system).
- (4) **Two recommendation letters.** Two academic recommendation letters from scholars who have the title BA, MS degree or higher in a related academic field and one of the recommendations from their supervisors is preferred. Please follow the IAEA RCA recommendation online system for submission of the recommendation letters or upload the recommendation letters signed by references (Please fill in the referee's phone number and email address on the letter)
- (5) **Motivation letter (one page).** Write your motivation to apply to this program and describe your objective and brief vision for this application;
- (6) **Identification Photo.** An official document indicating applicant's nationality. e.g. passport, national ID card, etc. (Include a copy of page showing the passport number, date of issue and expiration, photo, and name. Solution higher than 400\*600, width/height must be 3/4. Photo size is smaller than 1 MB).
- (7) **English language proficiency requirements:** Regular TOEFL (or TOEIC, TEPS, IELTS) score record more than below score will be highly evaluated (for students only from non-English speaking countries).
- (8) **Other supporting documents**
  - 1) List of Honors and Awards (downloadable)
  - 2) Employment Certificate
  - 3) School Profile/ Credit Rating System

## 6. Application remarks

38. The scholar must comply with the following scholarship requirements:

- (1) Applicants must sign a scholarship agreement represented by the RCA Scholarship Programme Chairperson, detailing all requirements and terms of the award.

- (2) Applicants should not hold another scholarship grant simultaneously.
- (3) Applicants must carry the full academic load each academic semester for the degree programme in which the scholar is enrolled and must maintain a general weighted average equal to or better than the equivalent of 2.0 (grading scale with 1.0 = highest and 3.0 = passing) according to the respective university grade rating system.
- (4) In case marks for a subject are not issued in time to meet the deadline for the review of the scholarship, an extension shall be considered by the RCA Scholarship Programme Committee until the final mark for the subject in question has been received. The student is responsible for advising the RCA Scholarship Programme Committee of the final mark received for this subject within one week of receipt and failure to do so may result in a penalty, as determined by the Scholarship Committee.
- (5) Applicants must submit at the start of each semester/trimester a proof of enrolment indicating the subjects enrolled in.
- (6) In case the student decides to drop a subject, the RCA Scholarship Programme Committee must be notified within one week of dropping the subject. Explanation for dropping the subject will not be required. Benefits and entitlements of the student will be recalculated accordingly. Breach of this requirement will result in termination of the scholarship grant.
- (7) Applicants must report grades at the end of each semester for the continuation of the scholarship.
- (8) Applicants must report academic or other difficulties to the RCA Scholarship Programme as soon as possible.
- (9) Applicants must not be gainfully employed while under the RCA Scholarship Programme. Applicants must work full-time in the country of origin after graduation for a period of 1 year for every year of financial support received.
- (10) Applicants must report any change in personal details to the RCA Scholarship Programme Committee including a change in name, address, contact details, etc. within one week of the registered change.
- (11) A scholarship recipient will be automatically stripped of all benefits if proven to have breached any condition of enrolment implemented by the University, due to plagiarism, threats to safety of the other

students and academic community and its buildings and facilities, not met attendance requirements, etc.

- (12) In case of prolonged illness or unavoidable conditions not as a fault of the student, a one (1) month grace period will be allowed and will not affect the status of the award. A review of the situation will be conducted by a representative of the RCA Scholarship Programme Committee after the grace period. An extension of another two (2) weeks may be further allowed without the absence affecting the grant of the scholarship. At the end of the additional two (2) weeks extension, it is possible that the scholarship will be adjusted or terminated.
- (13) In case the student is unable to graduate due to justifiable reasons, the student will be required to show proof of withdrawal from the programme. Justifiable reasons will be assessed by the RCA Scholarship Committee on a case-by-case basis.
- (14) In case of termination of the scholarship, another candidate will be selected to benefit from the remaining provisions of the scholarship withdrawn from the incumbent, starting from the succeeding semester, excluding non-refundable fees already paid to the University.

## **7. Suspension of payment of scholarship**

39. Should any of the following reasons apply, the grantee may be ordered to return a part of, or all of, the scholarship paid up to that time. Payment of the scholarship may also be stopped during the period up to the decision on the disposition of the matter.
  - (1) A grantee is determined to have made a false statement on his/her application;
  - (2) A grantee violates any article of his/her pledge to the RCA Scholarship Programme;

## **8. Further Information**

40. For any question about the program, scholarship and application procedure etc., please contact Dr. Tung Thanh DUONG, the program coordinator of RCA Scholarship Programme, at [rca-sps@vinatom.gov.vn](mailto:rca-sps@vinatom.gov.vn) (*tentative*). Tel.: +84-(024) 39422756 – Fax: +84-(024) 39422625

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