

# REPORT

## 27<sup>TH</sup> GENERAL CONFERENCE MEETING OF NATIONAL REPRESENTATIVES OF RCA MEMBER STATES

**IAEA- Vienna, 23 September 1998**

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Vienna, Austria, 1999

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**27<sup>th</sup> General Conference Meeting of National Representatives of  
RCA Member States**

**23 September 1998, IAEA, Vienna, Austria**

**EXECUTIVE SUMMARY**

The Meeting was attended by 29 delegates representing all 17 RCA Member States. The IAEA was represented by Mr. Qian Jihui, Deputy Director General for Technical Co-operation. Other IAEA participants were Mr. A. El-Saiedi, Director, Division for Africa and East Asia and the Pacific (TCPA), Mr. M.N. Razley, Head, East Asia and the Pacific Section (TCAPS), and Mr. C.R. Aleta, the RCA Coordinator.

Some of the important outcomes of the Meeting were as follows:

On the RCA Annual Report, the Meeting -

- adopted the 1997 RCA Annual Report, the first report produced using a new format;
- noted that the RCA Annual Report should be regarded as a flagship document for RCA and should be continuously improved; and
- required that achievements need to be highlighted, specially for the closed door projects.

Regarding the Status of RCA Agreement, the Meeting was informed that, as of July 1998, all 17 RCA Member States have accepted the extension of the Agreement.

With respect to the RCA Programmes and Activities for 1998 and the RCA Proposed Programme for 1999-2000 cycle, the Meeting -

- urged all National Representatives and National Project Co-ordinators to provide all possible assistance and to facilitate the implementation of RCA activities within their own countries; and
- requested the RCA Office to study, with due diligence and urgency, the possibility of rearranging unallocated leftover funds to support fully developed projects such as Radiation Oncology project,

Regarding the RCA Guidelines and Operating Rules, the Meeting accepted the proposed changes subject to further consideration on funding arrangement for the meetings of National Project Coordinators.

On the RCA Management, the Meeting -

- was in general consensus that there was widespread support for the principle of having a project manager position for the joint UNDP/RCA/IAEA project;

- noted, however, that some countries have some reservations on the role of project manager and the validity of appointment, and requested for additional information;
- requested the Agency to investigate further the mechanisms for both funding and administrative arrangement; and
- requested the Agency to immediately set up an ad-hoc committee consisting of senior level personnel to study structure and organization of RCA and requested the Agency to convene a meeting and prepare a report as soon as possible.

Regarding the Role of Lead Countries, the Meeting -

- noted the RCA General Conference Meeting in 1997 designated Lead Countries for thematic programs and suggested that they should continue to be the Lead Countries,
- reconfirmed the principle of using Lead Countries from among Member States to develop and implement RCA programme;
- adopted the working paper on "Preliminary Development of Lead Country Concept", in principle, as a provisional measure on the role of Lead Countries;
- requested the RCA Office to circulate the working paper and requested Member States to send their comments to the RCA Office;
- requested designated Lead Countries to send the nomination of the contact person as soon as possible; and
- agreed that this matter will be included in the agenda of an ad-hoc committee on Structure and Function of RCA.

With respect to RCA Vision Milestones, the Meeting recommended that Member States send further comments on the milestones to the RCA National Representative of Indonesia and the RCA Office as soon as possible, and that practical steps should also be taken as enough discussion has already taken place.

On the TCDC Tripartite meeting, the Meeting -

- recognized that the main thrusts of the meeting are, inter alia, the identification of possible areas of co-operation among the three Regional Agreements (ARCAL, AFRA and RCA) and endorsement of the intention to hold the 1999 Tripartite Forum for promoting TCDC;
- noted 6 areas of co-operation to be proposed by RCA to the Tripartite meeting, 3 of which are related to distance learning in nuclear medicine, radiation protection and tissue banking; and
- expressed desire to be fully briefed about the outcome of the Tripartite meetings.

The Meeting also recognized the contribution to RCA by Mr. A. El-Saiedi who is officially attending the RCA General Conference for the last time in his capacity as Division Head.

Finally, the RCA National Representative of Singapore confirmed the invitation for the next Regular Meeting of National Representatives of RCA Member States to be held in Singapore from 1 to 5 March 1999.



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**MINUTES**  
**OF**  
**the 27<sup>th</sup> General Conference Meeting**  
**of National Representatives of RCA Member States**

**23 September 1998 at VIC, C04 IAEA Board Room, Vienna, Austria**

The Meeting was attended by 29 delegates representing all 17 RCA Member States (**Annex 1**). The IAEA was represented by Mr. Qian Jihui, Deputy Director General for Technical Co-operation. Other IAEA participants were Mr. A. El-Saiedi, Director, Division for Africa and East Asia and the Pacific (TCPA), Mr. M.N. Razley, Head, East Asia and the Pacific Section (TCAPS), and Mr. C.R. Aleta, the RCA Coordinator.

**1. Opening**

**1.1 Remarks by Interim Chairperson (Myanmar)**

Mr. Tin Hlaing, RCA National Representative of Myanmar, was the interim Chair of the Meeting and was pleased to observe the unity, cooperation and achievements of RCA that were made during past year.

**1.2 Election of Chairperson**

The RCA National Representative of Singapore nominated Mr. P. Roberts, the RCA National Representative of New Zealand, as the Chairperson for the Meeting. Mr. P. Roberts was elected as the Chairperson by acclamation.

### **1.3 Statement by Chairperson**

Mr. P. Roberts in his opening statement (**Annex 2**) noted that the General Conference Meeting is mainly an opportunity to look at overall policy issues for the RCA and hoped to make further progress on the important concept of collaboration in TCDC between the three Regional Agreements. He commented that RCA had a relatively low level of activity and low Financial Implementation Rates in 1996 and 1997. He expressed his concerns that the implications of a low financial implementation rate will be potentially serious for the future of RCA and technical development in the region. Therefore, Mr. Roberts urged both Member States and the Agency to consider the ways and means to ensure the rapid and full implementation of existing RCA projects and to seek an appropriate administration and management of RCA for the future of RCA.

### **1.4 Adoption of Agenda**

The proposed Agenda was adopted with the addition of a sub-item “Recognition of the Contribution made by Mr. El-Saiedi to RCA” under Agenda Item 11 “Other Matters”. (**Annex 3**)

### **1.5 Welcome Address by DDG-TC on behalf of the IAEA**

The welcome address on behalf of the Agency was given by Mr. Qian Jihui, DDG-TC, IAEA (**Annex 4**). He noted that RCA celebrated its 25<sup>th</sup> anniversary last year; the Agreement had been extended for another 5 years to 2002, and all 17 Member States are signatories to this extension. He commented that RCA Member States have faced a great deal of challenges and these are reflected by political, economic and environmental situations as well as organizational changes in the RCA office and operational changes in managing the program.

He was pleased to note that RCA Member States embarked on several initiatives including the approval of a number of recommendations which will strengthen the regional management of the program, the adoption of the RCA Guidelines and Operating Rules, the adoption of five thematic areas and the designation of Lead Countries for each area and the identification of Regional Resource Units.

Mr. Qian congratulated the Member States for its adoption of a Vision for the Next 25 years and looked forward to Member States turning this vision into concrete milestones and action plans. He noted RCA's intention to establish regional management and the growing number of countries giving extrabudgetary contributions to the RCA programme. On the latter case, he commented that this is a sign of good health and encouraged Member States to expand this further - not only the number of donors but also the increased amounts.

He also cited that RCA has been used as a model for other regional agreements such as AFRA and ARCAL, and RCA has much to offer to the other regional agreements in terms of experience, expertise, and transfer of nuclear technology. He commended the promotion of TCDC among the regional agreements.

In conclusion, Mr. Qian hoped that RCA's maturity and experience should enable it to develop programs that help solve real world problems such as the lack of fresh water, the deteriorating environment, the inadequate quality assurance for medical brachytherapy applications, the insufficient availability of food and others.

Finally, he wished the National Representatives for fruitful meeting.

## 2. Adoption of the 1997 RCA Annual Report

The 1997 RCA Annual Report, in the new format, was adopted subject to the amendments in accordance with the written comments that were submitted by 4 Member States, namely Australia, Indonesia, Myanmar, and New Zealand. A corrigendum on “Extra-budgetary Contribution to RCA from Member States” for the 1997 Annual Report was attached as **Annex 5**.

However, the Meeting noted some general points which are as follows:

- i) The 1997 RCA Annual Report is the first report produced using a new format.
- ii) The Annual Report should be regarded as a flagship document for RCA and need to be continuously improved.
- iii) The executive summary of the report should contain a broad strategy and major achievements, policy direction of RCA and highlights of the RCA activities in that year.
- iv) It is necessary for Member States to collect and compile relevant information according to the headings of new format for the report.
- v) A simple format was already available and Member States were urged to follow this format and submit the report as soon as possible after completion of every activity.

## 3. Adoption of RCA 20<sup>th</sup> Regular Meeting of National Representatives Report

The report of the 20<sup>th</sup> Regular Meeting of National Representatives of RCA Member States in New Zealand was adopted.

The Meeting acknowledged the work done by the rapporteur in preparing a comprehensive, accurate and full report and also recommended that, in the future, a table on actions and recommendations should be attached as an annex so that they can be systematically followed up by both the Agency and Member States.

#### 4. Status of RCA Agreement

Mr. Aleta, referring to a table of date of acceptance to extend the Agreement by Member States, (**Annex 6**) advised that, as of July 1998, all 17 RCA Member States have accepted the extension of the Agreement.

The Meeting duly noted the status of RCA membership.

#### 5. Country Statements

The Country Statements received from 7 RCA Member States are attached as **Annex 7**.

The Meeting confirmed the decisions made in the 20<sup>th</sup> Regular Meeting of National Representatives of RCA Member States in New Zealand regarding the Country Statement, i.e. "Member States could add a supplementary statement on overall policy or management issues if they wished. At the RCA General Conference Meeting each country was expected to supply a Country Statement dealing with policy matters". This sentence was recorded in page 27 of the report of the 20<sup>th</sup> Regular Meeting of National Representatives of RCA Member States in New Zealand.

#### 6. Presentation of RCA Programme and Activities for 1998, Projects to be Closed in 1998 and RCA Programme for 1999-2000 Cycle

Mr. Aleta presented the joint UNDP/RCA/IAEA projects, the RCA programme and activities for 1998, projects to be closed in 1998 and also the RCA programmes for 1999-2000 cycle. (**Annex 8**)

He stated that meeting of Lead Countries for a joint UNDP/RCA/IAEA project (RAS/8/076 and RAS/8/080) was held in July 1998. The meeting developed detailed work plans in 4 sub-projects and a PFM on fifth sub-project scheduled to be held in Malaysia from 16 to 20 November 1998.

He also commented that, as of 10 September 1998, there were 16 ongoing projects; 2 are environment-related (RAS/8/076 and RAS/8/080), 4 are health-related (RAS/6/027, RAS/6/028, RAS/6/029, and RAS/7/008), 3 are industry-related (RAS/8/069, RAS/8/077, and RAS/8/078), 1 in radiation protection (RAS/9/018), 1 in agriculture (RAS/0/022), 2 in energy (RAS/0/021 and RAS/0/023), and 3 in general area (RAS/0/024, RAS/0/025 and RAS/4/016).

Mr. Aleta reported that there were three projects to be closed by the end of 1998, namely RAS/0/021, RAS/0/022 and RAS/0/024.

Regarding the RCA programme for 1999-2000 cycle, there were 27 projects; 14 projects of which are proposed as hardcore and 13 projects as Footnote-A projects.

After discussion the Meeting -

- i) noted the information prepared and presented by the RCA Office,
- ii) requested the RCA Office to study, with due diligence and urgency, the possibility of rearranging unallocated leftover funds to support fully developed projects such as Radiation Oncology project,
- iii) noted that the RCA Office is seeking the agreements and/or confirmations from Member States to host events that are identified and suggested on the list of regional events under the programme for 1999-2000,
- iv) requested that detailed work plans be provided to Member States to help them monitor the progress of programme,
- v) noted that for the first half of 1998 limited number of activities under RCA programme were implemented, however additional activities for the rest of the year would improve the financial implementation rate,
- vi) recognized the importance of facilitating the implementation of RCA programme for the remainder of 1998 and for the year 1999, and urged all National Representatives and National Project Co-ordinators to provide all possible assistance and to facilitate the implementation of RCA activities within their own countries,

vii) noted that Member States are invited to submit nomination of new National Project Coordinators for proposed projects for 1999-2000 cycle.

## 7. Administrative Issues

### 7.1. RCA Guidelines and Operating Rules

Mr. Rolland, RCA National Representative of Australia, introduced the working paper on Guidelines and Operating Rules for the RCA Programme (**Annex 9**) and informed the changes and modifications that were made in line with the decisions made at the 20<sup>th</sup> Regular Meeting of National Representatives of RCA Member States in New Zealand. The changes and modifications were proposed in order to improve the document and would provide more flexibility to the operation of RCA. The changes and modifications proposed were in terms of chairing of the meetings, a provision of secretarial work to meetings, composition of project committee, and the role of the Agency in accordance with RCA Agreement.

The Meeting thanked the National Representatives of Australia and Philippines and accepted the proposed changes subject to further consideration by Australia and Philippines of the points raised by Mr. Razley regarding to paragraph 6(c) on funding arrangement for the meetings of National Project Coordinators and with the deletion of the phrase "be a member of" in paragraph ~~5(b)~~ of the paper on roles and responsibilities of the Agency. <sup>3.1(e)</sup>

### 7.2. RCA Management

A working paper on the Establishment of a Project Manager Position for the UNDP/RCA/IAEA Project RAS/97/023 was introduced by Mr. Rolland

on behalf of working group. The paper was circulated for the Meeting (Annex 10). Mr. Rolland commented that the project manager position was required to increase management skills in RCA countries and the region for effective management of the project. He also recognized that there were difficulties in terms of funding sources, but stressed that the joint UNDP/RCA/IAEA project is a complex project and would need to be implemented with project manager position for its success.

The Meeting thanked the members of working group: Mr. Rolland (Australia), Dr. Anand (India) and Dr. Kobayashi (Japan). There was a wide spread support for the principle of having a project manager position. The Meeting -

- i) noted, however, that some countries have some reservations on the role of project manager and the validity of appointment, and requested for additional information,
- ii) expressed the views on the possibility for a regional management system based on either a project manager or a wider regional manager to assist RCA relation with outside organizations in the region,
- iii) recognized, that there is issue on funding to be resolved,
- iv) noted that the Agency accepted the third recommendations on the use of RCA funds to support the participation of delegates as Chairpersons stated as in the last paragraph of the working paper and agreed to keep this option under review on annual basis,
- v) requested the Agency to investigate further the mechanisms for both funding and administrative arrangement,
- vi) requested the Agency to immediately set up an ad-hoc committee consisting of senior level personnel to study structure and organization of RCA and also requested the Agency to convene a meeting and prepare a report as soon as possible. This matter will be included on the agenda of

the next Regular Meeting of National Representatives of RCA Member States in Singapore for discussion,

vii) noted that the Agency would study further the proposal contained in the working report and would report to the next Regular Meeting of National Representatives of RCA Member States in Singapore in March 1999.

### 7.3. Role of Lead Countries

Mr. Aleta introduced the discussion paper on "Role of Lead Countries" (**Annex 11**) and commented that this was introduced and discussed in the RCA General Conference Meeting in October 1997 and consequently, the National Representatives had decided to assign a Lead Country for each of the following five thematic areas;

- 1) Industry and Environment,
- 2) Health Care,
- 3) Agriculture,
- 4) Radiation Protection,
- 5) Energy Related and Research Reactors.

He noted that the role of Lead Countries and the designation of Lead Countries for ongoing projects were expanded further in the 20<sup>th</sup> Regular Meeting of National Representatives of RCA Member States in New Zealand. The discussion paper proposed the role of Lead Country during implementation and programming stages. An informal working group was convened to discuss the issue and presented to the Meeting a working paper on "Preliminary Development of Lead Country Concept" (**Annex 12**),

After further discussion the Meeting -

i) noted the RCA General Conference Meeting in 1997 designated Lead Countries for thematic programs and suggested that they should continue to be the Lead Countries,

- ii) reconfirmed the principle of using Lead Countries from among Member States to develop and implement RCA programme and recognized that the Lead Country provides a unique way of demonstrating regional ownership which spreads and shares the responsibility to a significant number of different Member States,
- iii) noted the working paper on “Preliminary Development of Lead Country Concept” and adopted the working paper, in principle, as a provisional measure on the role of Lead Countries and requested the RCA Office to circulate the working paper and requested Member States to send their comments to the RCA Office,
- iv) requested designated Lead Countries to send the nomination of the contact person as soon as possible,
- v) agreed that this matter will be included in the agenda of an ad-hoc Committee on Structure and Function of RCA.

#### 7.4. RCA Vision Milestones

Dr. A. Djaloeis, RCA National Representative of Indonesia, presented the paper on “RCA-Vision: Proposed Milestones” (**Annex 13**) and elaborated the 7 milestones proposed to realize the “RCA Vision for the Next 25 Years”. He suggested that the paper could be regarded as trigger document for further refinement and improvement.

The Meeting discussed and expressed views on the 7 suggested activities and their time schedules, particularly on the documentation of RCA-related country profile of RCA Member States and of all TCDC networks and activities within the RCA.

The Meeting thanked Dr. A. Djaloeis for his work and

- i) noted the paper and agreed that the Vision Statement should be finalized as soon as possible by taking into account the comments from Member States,
- ii) recommended that Member States send further comments on the milestones to the RCA National Representative of Indonesia and the RCA Office as soon as possible.

#### 7.5. **Recording In-Kind Contributions**

Mr. Aleta presented the discussion paper on “How to Calculate In-Kind Contributions: Some Suggestions” (**Annex 14**) and commented that the paper was prepared to assist Member States to calculate the dollar value of in-kind contributions. He recalled that Member States wanted their in-kind contributions to be reflected in the Annual Report, since not all Member States are able to give cash contributions.

At the meeting, a concern was raised why it was necessary to convert the in-kind contribution in dollar value as this conversion would deviate from the spirit of providing in-kind contribution vis-a-vis cash contribution; it was pointed out, however, that some in-kind contribution are in actual cash value

The Meeting thanked Mr. Aleta for the comprehensive paper and

- i) requested the Agency to provide information on average or standard rating for conducting particular activity,
- ii) recommended that Member States continue to submit man-days or man-hours or best estimates of cost and a list of events for the consideration of the Agency.

## 8. TCDC Tripartite Meeting

Prior to the discussion on the Agenda item, the RCA National Representative of Malaysia, as Lead Country for TCDC, presented the discussion paper on “TCDC in the RCA programme” (**Annex 15**) and commented that there were some highlighted points in sections 3.2 and 4, and appreciated three Member States who provided inputs for the paper and hoped to get more inputs from other Member States.

The Meeting noted the paper and thanked the delegate of Malaysia and urged Member States to provide comments.

### 8.1 Agenda Items

The Meeting noted the “Revised Provisional Agenda” (**Annex 16**) for Tripartite meeting of AFRA, ARCAL and RCA to be held on 24 September 1998 in IAEA Headquarters, Vienna, Austria and recognized that the main thrusts of the meeting are, inter alia, the identification of possible areas of co-operation among the three Agreements and to endorse the intention to hold the 1999 Tripartite Forum for promoting TCDC.

In preparation for the Tripartite meeting, an informal working group meeting was convened on 22 September 1998 to identify possible areas of co-operation that RCA could offer to the other regional Agreements. The delegate of Malaysia presented the result of the informal working group meeting, and informed that six areas were identified as possible areas for RCA to offer technology transfer to the other regions. The six areas are:

- 1) Distance Learning Material for Training in Nuclear Medicine Technology,
- 2) Distance Learning Material for Training in Radiation Protection,
- 3) Open Distance Learning Diploma Course for Tissue Bank Operators,
- 4) Regional Exercise for Radiological Emergency Preparedness Training,
- 5) Guidebooks for Training on NDT,

6) Harmonization of Regulation on Food Irradiation for Asia and Pacific.

The Meeting -

- i) noted the above six areas to be proposed by RCA as possible areas for co-operation for the Tripartite meeting,
- ii) decided that the RCA delegation for the Tripartite meeting be comprised of Australia representing donor countries, Malaysia as Lead Country for TCDC, Myanmar as previous chair, New Zealand as current chair, and Singapore as expected chair for next year,
- iii) requested the RCA Office to ensure that there should be a follow-up report to Member States on the outcome of any TCDC Tripartite meeting.

8.2. **Proposal on TCDC**

The Meeting noted the paper “Project Proposal: Promotion of TCDC Modality Among Regional Agreements (AFRA, ARCAL, RCA) (Tentative)” (Annex 17).

9. **Next Meetings**

The RCA National Representative of Singapore confirmed the invitation for the next Regular Meeting of National Representatives of RCA Member States to be held in Singapore from 1 to 5 March 1999.

10. **Other Matters**

10.1. **Formation of Advisory Group**

Mr. Aleta presented the discussion paper on “Advisory Group” (Annex 18) as requested by the 20<sup>th</sup> Regular Meeting of National Representatives of

RCA Member States in New Zealand. It was agreed to create an Advisory Group consisting of high-level experts to meet and consider the overall policy directions and management of RCA. He recalled and noted that, to date, there was no agreement on the criteria on selection of members of the Advisory Group.

After discussion, the Meeting -

- i) noted the Advisory Group meeting for thematic program on industry and environment has not gone forward,
- ii) requested the Agency to consider the need of reformulation of the basis of the Advisory Group meeting with broad objectives and to seek the possibility of holding the meeting for the thematic programmes of 2001-2002 project cycle before the next Regular Meeting of National Representatives of RCA Member States in Singapore,
- iii) agreed that, in principle, the selection criteria will be senior policy makers who are in aware of the national development programs and requested Member States review the criteria and send comments to the RCA Office within two weeks.

#### 10.2. High Level Participation in RCA Meetings

Mr. Razley informed the Meeting the background of the suggestions. It was proposed to invite Head of Delegation of RCA Member States to IAEA General Conference to attend and participate in the opening part of a RCA General Conference meeting. This will enable the head of delegation to be informed on the previous achievements of RCA and current trend of the RCA activity and financial sources that would affect the future direction of RCA.

This proposal was noted in consideration of lack of decision-making capacity of participants to RCA meeting due to various level of position and

mandate of representatives and trend of declining financial support from Member States.

The Meeting noted that this is a political issue to a large extent and invited the Agency to prepare a paper for the circulation to Member States for their comments.

### 10.3. RCA Membership

Mr. Aleta advised that there were two countries, namely Yemen and Iran, that signified their interest to become a member of RCA, that Yemen's request was received in writing and the Iran's request verbal. He commented that the advice received from legal division of the Agency was that Yemen and Iran did not belong to the regional grouping of RCA, and it is up to Member States to decide. He added that, in the past, non-RCA Member States could participate in the activity of RCA, provided certain conditions were met.\*

The Meeting noted the information provided by the RCA Office and recommended the Agency to send a formal letter to RCA Member States for considerations.

### 10.4. Numbering of Meetings and Reports

Mr. Aleta informed that RCA previously had a Working Group Meeting, however the meeting in Taupo, New Zealand in 1998 was called a Regular Meeting of National Representatives of RCA Member States, and asked whether to number the meeting the 20<sup>th</sup>. He proposed that there is a necessity

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\* These conditions are as follows (1) the host country agrees to accept the participant from non-RCA Member States, (2) it is at no cost to the RCA and (3) it will not jeopardize the participation of RCA Member State.

for clear numbering of meetings of National Representatives of RCA Member States and reports for consistency.

There were diverse views from Member States and the Meeting requested the Agency to seek a most appropriate way for numbering and to inform Member States of the results.

#### 10.5. Recognition of the Contribution made by Mr. El-Saiedi to RCA

The RCA National Representative of Sri Lanka, on behalf of the RCA National Representatives, recognized that Mr. A. El-Saiedi, Director of Technical Co-operation for Africa and for East Asia and the Pacific (TCPA) was due to leave the Agency and thanked him for his demonstrated stewardship in steering RCA program in the period of transition and wished him every success in the future.

Mr. A. El-Saiedi thanked for the recognition and expressed that he first encountered with RCA in the meeting in Kuala Lumpur in 1995. He commented that RCA is a very good example on how countries in the region can work together and RCA has been a leading regional programme. He also stressed the importance of the spirit of collaboration irrespective of formalities. He wished to continue to work together with RCA in future.



Regional Co-operative Agreement  
International Atomic Energy Agency

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# **ANNEXES**

**FOR**

**27<sup>TH</sup> GENERAL CONFERENCE MEETING OF  
NATIONAL REPRESENTATIVES OF  
RCA MEMBER STATES**

**IAEA- Vienna, 23 September 1998**



27<sup>th</sup> General Conference Meeting  
of Representatives of RCA Member States  
23 September 1998, Vienna, Austria

**List of Participants**

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Resident Representative of the Union  
of Myanmar to the IAEA

Mr. Myint Maung Kyaw  
Director  
Department of Atomic Energy  
Ministry of Science and Technology

Lt. Colonel Thaung Shwe  
Lecturer, Physics Department  
Defense Services Academy  
Ministry of Defense

Dr. Tin Hlaing  
Deputy Director General  
Department of Atomic Energy  
Ministry of Science and Technology

NEW ZEALAND

Dr. Peter Roberts  
Manager, Industrial and Biological  
Nuclear Sciences Group  
Institute of Geological and  
Nuclear Sciences

PAKISTAN

Dr. K.A. Shoaib  
Minister (Technical)  
Permanent Mission

Dr. Hasibullah  
Director, International Affairs  
and Training,  
PAEC

PHILIPPINES

Dr. Alumanda de la Rosa  
Deputy Director,  
Philippine Nuclear Research Institute  
(PNRI)

SINGAPORE

Mr. Stephen CHONG Ket Min  
Director, Radiation Services  
Department of Scientific Services  
Ministry of Health

Mr. LEE Kheng Seng  
Senior Engineer,  
International Environment and  
Policy Department  
Ministry of Environment

SRI LANKA

Dr. Prinath Dias  
Chairman,  
Atomic Energy Authority

Mr. J.M.A.C.A. Jayasinghe  
Scientific Secretary,  
RCA National Co-ordinator  
Atomic Energy Authority

THAILAND

Mr. Manoon Aramrattana  
Deputy Secretary General  
Office of Atomic Energy for Peace

Mr. Pathom Yamkate  
Deputy Secretary General  
Office of Atomic Energy for Peace

Mrs. Yoawaluck Leenanupan  
Head, Planning and Foreign  
Relations Section,  
Office of Atomic Energy for Peace

VIET NAM

Dr. Tran Huu Phat  
Director General  
Vietnam National Atomic Energy  
Commission



## **OPENING STATEMENT FROM THE CHAIRMAN (RCA GENERAL CONFERENCE MEETING, 23 SEPTEMBER 1998)**

Mr Qien, DDG-TC, distinguished Representatives, Delegates, Agency staff and colleagues.

New Zealand is delighted to be honoured with the responsibility of chairing this important meeting of RCA. I bring the greetings of my colleagues in New Zealand. Many of you met them at the 20<sup>th</sup> Regular Meeting of Representatives held in New Zealand earlier this year. To host that Meeting was a great privilege and certainly the highlight of the few years that New Zealand has been a member of RCA.

The Report of that Meeting in New Zealand is one of the Agenda items for today. You will see from the Report that a great deal of work was done and many recommendations made. It is our task today to ensure that we are following up on those recommendations appropriately.

The Meeting of Representatives spent considerable time looking at the RCA programme for this year and for the 1999/00 period. At the time of the Meeting, our approval of the projects was conditional on the further development of detailed workplans. We will all be interested to learn the extent to which we have moved forward on these projects.

However, the General Conference Meeting is mainly an opportunity to look at overall policy issues for the RCA. I note that we hope to make further progress on the important concept of collaboration in TCDC between the three Regional Agreements.

I suggest that the items of most importance, however, are contained within item 8 on Administration. We learn from our Annual Reports for 1996 and 1997 that RCA had a relatively low level of activity within some RCA projects, and a overall Financial Implementation Rate that pulled down the TC average. Member States and the Agency have recognized that there is no single cause for this situation, and that some of these causes were unavoidable. Also we realise that the Financial Implementation Rate is not the sole, or even most, important parameter on which to judge the success of projects.

However, funding agencies are in an extended period of financial constraints. In such times, the implications of a low implementation rate, if we find that this is continuing, are potentially serious for the future of RCA and technical development in our Region. Therefore, I urge us all, both Member States and the Agency, to consider two things most carefully. First, what must be done to ensure that existing RCA projects are rapidly and fully implemented? Second, and even more importantly for the future of RCA, can we put in place at today's Meeting policies that will guide the administration and management of RCA in the lead up to the finalisation of project proposals for the 2001/02 period.

I look forward to the Meeting and I am sure that, with your help, we will have a successful outcome.

### **ADOPTION OF AGENDA**

Now I would like to acknowledge the support that the Department of Technical Cooperation continues to provide to RCA. And to invite the Head of that Department, Mr Qien, to address the Meeting.

**27<sup>th</sup> RCA General Conference**  
**23 September 1998, 9.00-12.00 and 14.00-17.00 hours**  
**VIC, C04/ IAEA Board Room, Vienna, Austria**

AGENDA

1. OPENING
  - 1.1 REMARKS BY INTERIM CHAIRPERSON (Myanmar)
  - 1.2 ELECTION OF CHAIRPERSON
  - 1.3 STATEMENT BY CHAIRPERSON
  - 1.4 ADOPTION OF AGENDA
  - 1.5 WELCOME ON BEHALF OF THE IAEA
2. ADOPTION OF THE 1997 RCA ANNUAL REPORT
3. ADOPTION OF RCA 20<sup>TH</sup> MEETING OF REPRESENTATIVES REPORT
4. STATUS OF RCA AGREEMENT
5. COUNTRY STATEMENTS
6. PRESENTATION OF RCA ACTIVITIES FOR 1998
  - 6.1. JOINT UNDP/RCA/IAEA PROJECT
  - 6.2. ONGOING PROJECTS
  - 6.3 PROJECTS TO BE CLOSED
7. PROJECTS FOR 1999-2000 CYCLE
8. ADMINISTRATIVE ISSUES
  - 8.1. RCA GUIDELINES AND OPERATING RULES
  - 8.2. RCA MANAGEMENT
  - 8.3. ROLE OF LEAD COUNTRIES
  - 8.4. RCA VISION MILESTONES
  - 8.5. RECORDING IN-KIND CONTRIBUTIONS
9. TCDC TRIPARTITE MEETING
  - 9.1. AGENDA ITEMS
  - 9.2. PROPOSAL ON TCDC
10. NEXT MEETINGS
11. OTHER MATTERS
  - 11.1. FORMATION OF ADVISORY GROUP
  - 11.2. HIGH LEVEL PARTICIPATION IN RCA MEETINGS
  - 11.3. RCA MEMBERSHIP
  - 11.4. NUMBERING OF MEETINGS AND REPORTS

**27<sup>th</sup> RCA General Conference**  
**23 September 1998, 9.00-12.00 and 14-17.00 hours**  
**VIC, C04/ IAEA Board Room, Vienna, Austria**

ANNOTATED AGENDA

AGENDA ITEM 1. OPENING

- 1.1 The interim Chair will be assumed by Myanmar, last year's GC Chairperson. The interim Chairperson is expected to give a short statement.
- 1.2 The interim Chairperson will call for nomination of the Chairperson. The Conference is expected to name the National Representative of New Zealand, host of the previous meeting of RCA National Representatives held in Taupo, New Zealand on 30 March -3 April 1998, to be the Chairperson.
- 1.3 The elected Chairperson is expected to give a short statement.
- 1.4 The chairman will call for the adoption of the agenda. It is expected that any Member State will inform the RCA Office of any items it may wish to put in the Agenda a few weeks before the conference for the other Member States' consideration.
- 1.5 The DDG-TC will welcome the delegates and give a brief statement regarding his views on RCA and the related challenges and issues facing the agreement, as well as related TC policies, strategies and new initiatives. (He may also mention the importance of the TCDC and ECDC among the 3 regional agreements.)

AGENDA ITEM 2. ADOPTION OF THE 1997 RCA ANNUAL REPORT

The Conference will be asked to adopt the 1997 RCA Annual Report. During the last meeting of RCA National Representatives held in Taupo, New Zealand, on 30 March-3 April 1998, the Meeting recommended some revisions/additions to the annual report. The RCA Coordinator will brief the Conference about the changes made on the Annual Report based on the comments received and recommendations made during the Taupo Meeting. The revised report was circulated to Member States on 4 August 1998. Member States are expected to adopt the Annual Report.

AGENDA ITEM 3. ADOPTION OF THE 20<sup>TH</sup> MEETING OF NATIONAL REPRESENTATIVES

The Conference will be asked to adopt this report. Comments were received from several Member States on the circulated draft.

AGENDA ITEM 4. STATUS OF RCA AGREEMENT

The Meeting will be informed about the latest status of the RCA Agreement. At the Taupo, NZ meeting, one country—Thailand—was still in the process of doing so. However, in July Thailand has given its notice of acceptance to the Agreement, making all 17 MS signatories again.

AGENDA ITEM 5. COUNTRY STATEMENTS

Member States are expected to deliver their country statements.

## AGENDA ITEM 6. PRESENTATION OF RCA ACTIVITIES IN 1998

### 6.1. JOINT UNDP/RCA/IAEA PROJECT.

The Conference will be informed about the present status of implementation of the project specially in the different sub-projects. The RCA Coordinator will report on the output of the Meeting with Lead Countries (scheduled on 27- 31 July 1998)

Progress on the development of possible linkages with other programmes will be mentioned. For example, on the sub-project on Electronic Networking and Outreach, with the APDIP programme of the UNDP; with the management of marine coastal environment and its pollution, with the Global Environmental Facility/UNDP/IMO Regional Seas programme, and possibly others.

### 6.2. ONGOING PROJECTS

The status of ongoing projects will be presented. Projects which are for termination or extension will be discussed. (The list of ongoing Projects will be distributed during the Conference)

### 6.3. PROJECTS TO BE CLOSED

The projects closed/to be closed and the achievements of each will be presented. There are three(3) ongoing projects earmarked for closure by end of the programming cycle: RAS 0/021( on nuclear power planning), RAS/0/022( on harmonization of trade and public acceptance of irradiated food), RAS/0/023( on energy, electricity and nuclear power planning). (List of Projects to be available during the Conference)

## AGENDA ITEM 7. PROJECTS FOR 1999-2000 CYCLE

The list of new projects proposed for the 1999-2000 cycle will be presented; projects will be categorized into the thematic programme areas and funding sources. The Meeting will be informed of the proposed activities( regional training events, meetings, etc.) under the programme and will be requested to make commitments, if possible, on the hosting of these events.

## AGENDA ITEM 8. ADMINISTRATIVE ISSUES

- a. RCA GUIDELINES AND OPERATING RULES. At the meeting in Taupo, New Zealand on 30 March-3 April 1998, Member States agreed to designate Australia and Philippines to comprise a task group to study the operating rules and guidelines for possible revisions/amendments.

The Task Group circulated to MS the results of its study. It is expected that MS will give their comments on the proposed revisions/amendments prior to the Conference.

- b. RCA MANAGEMENT. At the last RCA Meeting of National Representatives held in Taupo, New Zealand on 30 March-3 April 1998, Member States agreed that Australia, together with Japan and India, would submit follow-ups to the proposal of stationing a regional RCA representative in the region. Some of the issues pertain to funding and reporting relationship. It is expected that MS will provide comments on this prior to the GC.
- c. ROLE OF LEAD COUNTRIES. Lead Countries had been designated by MS in various thematic programme areas and projects. Their role was until

now mainly in connection with development of project proposals for the 1999-2000 cycle.

Their role must be clarified with respect to the implementation of projects. The RCA Guidelines and Operating Rules is silent on this matter.

- d. RCA VISION MILESTONES. At the last RCA Meeting cited above, MS adopted the paper by Indonesia on a "Vision for RCA for the Next 25 Years"; to be able to realize this Vision it was agreed Indonesia will prepare "milestones" which will indicate progress towards achieving said vision. It is expected that a copy of this will be circulated by Indonesia prior to the GC for comments by MS.

The Conference is expected to identify and further clarify this role. A draft paper on this will be distributed.

- e. RECORDING IN-KIND CONTRIBUTIONS: RCA Member States expressed desire to have their in-kind contribution recorded in the RCA Annual Report. There seems to be no standard way of doing this; Member States submit their own estimates of this in-kind contribution which is comprised of the following:

- Cash support to locally-hosted regional activities—treated as in-kind by the Agency since the funds do not enter the Agency's accounting system.
- In-kind(no cash involved) in the form of manpower, use of facilities and other services provided to the project, but no direct funds are involved.

A suggested methodology of estimating in-kind contribution is being prepared by the Secretariat for comments of member states.

#### AGENDA ITEM 9. TCDC TRIPARTITE MEETING

The agenda for the tripartite meeting with the other regional agreements(AFRA and ARCAL) will be presented. A proposal to improve TCDC modality in the regions will also be presented during the tripartite meeting involving the 3 regional agreements, AFRA, ARCAL and RCA, for endorsement by Member States. The meeting will endorse the participation of RCA at the tripartite meeting and the proposal.

#### AGENDA ITEM 10. NEXT MEETINGS

#### AGENDA ITEM 11. OTHER MATTERS

This will contain other topics which may be suggested way before the general conference or during the conference.

- 11.1. Formation of Advisory Group
- 11.2. High Level Participation in RCA Meetings
- 11.3. RCA Membership
- 11.4. Numbering of Meetings and Reports



## Speech of Mr. J. Qian

(on the occasion of the 27th RCA GC meeting, 23 September 1998)

Distinguished Representatives, Delegates:

It is a privilege for me to welcome you this morning during the occasion of the 27th Regional Cooperation Agreement (RCA) General Conference Meeting.

As you may all know RCA celebrated its 25th anniversary last year and that the RCA Agreement has been extended for another 5 years to 2002. It is also noteworthy to state that all 17 Member States are now signatories to the Extension of the Agreement.

RCA has gone a long way during the quarter century of its existence –it can be said that RCA has been involved in a wide number of nuclear applications in the region, be this in agriculture, industry, health, environment, energy or radiation protection.

Time will not permit enumerating the achievements under each field for each Member State--the Member States have indicated these concisely in your anniversary booklet "*RCA- A Window to the Future.*"

(NOTE: Mr. Qian may elect to dispense with the citing of the highlights)

Let me just highlight a few examples which demonstrate clear impact and usefulness to participating countries.

In Agriculture food irradiation, one of the earliest technologies introduced in the region, has now been well accepted with commercial and demonstration food irradiator facilities in a number of Member States; the region is also now on the way to adopting a harmonized set of the regulations on food irradiation. RCA presently plans to develop protocols on using irradiation for quarantine treatment of horticulture products and food in trade. The use of radiation to develop new crop varieties has resulted in issuance of new cultivars; mutation breeding has taken roots in most RCA Member States and, in combination with biotechnology, is now gaining ground at the national level to address concerns in food security.

In Industry, the majority of countries in the region have now a sustainable program on Non-Destructive Testing personnel training and certification program, thanks to the joint UNDP/RCA/IAEA-funded project which supported activities not only in this area but also in the transfer of tracer technology and nucleonic control systems, and radiation processing to industries, thereby contributing to improved processing efficiencies in most industrial operations

such as mineral ores, petroleum, and beverage industries, utilizing these technologies.

In Health, 16 tissue banks using radiation sterilized tissue grafts are now in operation in several Member States. In addition, distance learning materials for teaching technical personnel of tissue banks have been developed and a first batch of trainees will conclude their one-year study this year. Additionally, the technology for the formulation of a low-cost bulk reagent for diagnosis of Hepatitis B was introduced, several nuclear instruments for gamma imaging were upgraded, and distance learning materials for nuclear medicine technicians have been developed. The latter has attracted attention of the other regional agreements (AFRA and ARCAL).

In Energy, in a region where great amounts are needed, several Member States have adopted Agency-developed planning tools in planning their energy, electricity and nuclear power systems. I am pleased to note that now RCA Member States have proposed to undertake a comparative assessment of different energy options as a further step to improving the decision-making process related to electricity generation systems.

In Radiation protection Member States have diverse experience in building up their radiation protection infrastructure. Efforts have been focused on emergency response, regulatory framework, and adoption of basic safety standards in radiation protection. In addition the Member States have developed distance learning materials in radiation protection which are being used to train additional personnel.

(Note: Mr. Qian may resume his talk here if the above highlights are omitted)

While the achievements during the past quarter century are appreciable, the next 25 years may task RCA to do even better.

RCA Member States face already a great deal of challenges during the first years of this second period and these are reflected by the political, economic, and environmental situations which are still being felt in the region, as well as organizational changes in the RCA office and operational changes in managing its program, all of which had and will have significant effects on the RCA programme.

Politically, the region has witnessed a number of high impact events that caused and are still causing some disruptions in RCA activities. These events include civil disturbances in Indonesia, the nuclear tests of India and Pakistan, and actions and reactions concerning certain activities in Afghanistan and Pakistan.

Economically, the effects of the economic instabilities in the region which started in 1997 are still being felt today putting severe constraints on RCA Member States.

Environmentally, the region was also affected much by onslaught of environmental disasters --first the El Nino which caused drought in many parts of the region. Now we see the recent flooding in a number of Member States. Last year's "smaze" (term for smoke and haze) still linger over portions of Southeast Asian countries due to forest fires. Last but not least, the seas of some Member States are affected by harmful algal bloom.

On the Organizational side, the RCA office in the Agency experienced some transitional changes in personnel and operations. There was a restructuring in the Technical Cooperation (TC) Department; changing twice the RCA Co-ordinator within a short span of time; and the adoption of the Guidelines and Operating Rules for the RCA Programme.

All these circumstances had naturally an impact on the RCA TC activities, some of which is negative, and have to be addressed in order to recover the momentum of an effective RCA Programme.

Distinguished Representatives:

In shaping the future course for your RCA, you have embarked on a number of initiatives that will no doubt lead to a more effective and sustainable programme.

These initiatives cover both management approach of the programme and long term planning. On the management side you have taken a number of positive actions such as:

First, you approved a number of recommendations on improving regional management of the programme;

Second, the adoption of the RCA Guidelines and Operating Rules, which will be further reviewed in today's meeting;

Third, you adopted five thematic areas and designated lead countries for each thematic area, which, together with other Member States, were responsible for putting project proposals for the forthcoming programming cycle. The number of lead countries are now expanded to include other projects not within the thematic areas. It is quite important to reach to full understanding between yourselves on the role of the lead countries during the implementation stage and future programming activities.

Fourth, you introduced the concept of Regional Resource Units (RRU) and began identifying them. This goes in line with the General Conference Resolution on identifying Centres of Excellence.

On the long term planning, the RCA Member States have adopted a Vision for the next 25 years. I congratulate you on your optimism -- since the agreement is only extended every 5 years, but you anticipate that the RCA would reach its 50th year! The Agency looks forward to Member States' fleshing out of this vision into concrete milestones and action plans that would form the basis for Medium Term Plans and for submitting proposals for future programming cycles, including that for 2001-2002. It may be said that for the RCA region, your Vision could be seen as a Regional Program Framework, which is a wider concept than the Country Programme Frameworks.

Your initiatives are undoubtedly worthwhile and the Agency will support you in your undertakings within the limitations of available resources.

Distinguished Representatives:

While Agency assistance may be available to support the RCA program, much of the credit should rest with the Member States whose commitment should be continued and enhanced. This commitment could take many forms such as increased involvement in the programming and implementation of the RCA program and increased provision of resources. This is a sign of good health in the Agreement and I encourage you to expand this further ---not only in number of donors but also in the amount.

RCA, considered to be a pioneering approach to Technical Cooperation among Developing Countries (TCDC) when first organized, has much to offer to the other regional agreements in terms of experience, expertise, and transfer of nuclear technology. During the past two years representatives of the three regional agreements have initiated dialogue in promoting further the TCDC modality among the regional agreements--this is a commendable move along the UN concept of enhancing TCDC.

Finally, let me reiterate that RCA's maturity should enable it to develop programs which will utilize the existing capacity and infrastructure in the region to help solve real problems, such as: lack of fresh water, deteriorating environment, deficient quality assurance in medical brachytherapy applications; insufficiency in food supply and others --- to reach out to the decision-making level of governmental and private organizations so that nuclear techniques will be part of the mainstream development program of the region; and most of all, to interface with the end-users which should be the ultimate beneficiaries of the technology transfer.

Distinguished Representatives:

The agenda before you is full and I wish you a fruitful conference.

Thank you all for listening.



## Corrigendum 1

Please replace page 43 of the Annual Report

Table 7a

**Extra-budgetary Contribution to RCA from Member States**  
(In US\$ except as indicated)

Donor	Carry-over	Received in 1998 <sup>*</sup>	Total available, 1998
AUSTRALIA	314,476	314,248.45 <sup>***</sup>	628,724.45
JAPAN	983,835 <sup>**</sup>	0	983,835
KOREA	70,499	0	70,499
MALAYSIA	44,748	0	44,748
INDONESIA	35,238	0	35,238
CHINA	97,532	0	97,532
THAILAND	27,079	0	27,079
PHILIPPINES	25,160	0	25,160
SRILANKA	0	5,059	5,059
NEW ZEALAND	20,436		20,436
<b>Total, Member States</b>	<b>1,619,003</b>	<b>319,307.45</b>	<b>1,938,310.45</b>
UNDP	60,000	590,000	650,000
<b>Total, Donors</b>	<b>1,679,003</b>	<b>909,307.45</b>	<b>2,588,310.45</b>

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<sup>\*</sup> Revised 12 September 1998

<sup>\*\*\*</sup> Received in July 1998

<sup>\*\*</sup> Does not include the amount of \$ 337,139 given to the regular budget

### Status of RCA Agreement

Second Agreement to Extend the 1987 Regional Co-operative Agreement (RCA) for  
Research, Development and Training Related to Nuclear Safety and Technology

#### Status of Acceptances

State	Date of Receipt of Notification of Acceptance	Entry into Force
AUSTRALIA	15 December 1997	15 December 1997
BANGLADESH	16 October 1996	16 October 1996
CHINA	11 April 1997	11 April 1997
JAPAN	18 July 1997	18 July 1997
INDIA	18 April 1997	18 April 1997
INDONESIA	6 February 1998	6 February 1998
KOREA, REPUBLIC	12 May 1997	12 May 1997
PAKISTAN	5 February 1997	5 February 1997
MALAYSIA	14 March 1997	14 March 1997
MONGOLIA	7 October 1997	7 October 1997
MYANMAR	20 February 1998	20 February 1998
NEW ZEALAND	2 December 1997	2 December 1997
PHILIPPINES	3 March 1998	3 March 1998
SINGAPORE	24 September 1996	16 October 1996
SRI LANKA	9 June 1997	9 June 1997
THAILAND	7 July 1998	7 July 1998
VIETNAM	28 August 1997	28 August 1997

**Note:** Pursuant to Article 1 of the Second Agreement to Extend the 1987 RCA, the 1987 Regional Co-operative Agreement "shall continue in force for a further period of five years with effect from 12 June 1997 through 11 June 2002. The above list deals with the entry into force of the Second Agreement to Extend the 1987 RCA with respect to each State.

**TWENTY SEVENTH GENERAL CONFERENCE MEETING  
OF  
REPRESENTATIVES OF RCA MEMBER STATES**

**COUNTRY REPORT : PEOPLE'S REPUBLIC OF BANGLADESH**

**Dr. M.A. Wazed Miah**

RCA National Coordinator  
and  
Chairman

Bangladesh Atomic Energy Commission

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**COUNTRY STATEMENT ON RCA :**  
**People's Republic of Bangladesh**

**Mr. Chairman,  
Distinguished Delegates,  
Ladies and Gentleman,**

On behalf of the Bangladesh delegation, I wish to extend our warmest congratulation to you on your election to the Chairman, for the twenty Seventh General Conference Meeting of Representatives of the RCA member states. I strongly believe that under your able leadership and guidance the meeting will be of great success and I assure you of our allout cooperation in this regard.

A highlight of this year was the Working Group Meeting held in Taupo, Newzealand 30 March-03 April which was notable for addressing different issues relevant to signaling the start of the next quarter century of RCA progress and challenges for the new era.

The Bangladesh delegation is of view that the RCA programmes of activities have significantly contributed to the peaceful uses of nuclear science and technology in the member states, particularly, in the fields of agriculture, food preservation, industry, health/medicine and environment. Bangladesh has been actively associated with the RCA since its inception and participating in almost all its programmes. Undoubtedly, we have benefited from the RCA activities through sharing of regional resources, facilities, equipment, training and expertise. Bangladesh, therefore, wishes to express its deep gratitude to the (IAEA, UNDP, donor countries, national research Institutes in RCA countries and all others who have contributed to the success of the objectives, programmes and activities of RCA.

**Ladies and Gentlemen**

Bangladesh, because of its resource constraints, has been and will have to be selective in undertaking projects for the peaceful uses of nuclear science and technology. R&D programmes of the country and development of related institutional infrastructure and human resources are drawn up keeping such constraints in view. As the focal point of RCA, Bangladesh Atomic Energy Commission is dedicated to selective R&D programmes which are relevant to problems faced by different sectors of economy in short, medium and long terms perspectives. Most of the R&D activities under RCA and IAEA/UNDP are carried out in various centres, Institutes and R&D establishments of the BAEC in Medical and other sectors both private and public sectors. This organization is dedicated to the peaceful uses of atomic energy in industry, health, agriculture, energy, environment and generation of nuclear power.

In the light of above background let me now relate the salient points of our involvement in various RCA projects :

**1. Energy and Nuclear Power Planning (RAS/013-04)**

Efforts are being made to build up indigeneous capabilities in energy planning on a sustainable basis with particular reference to implementation of Nuclear Power Programmes. One participant from Bangladesh attended the Regional Workshop on 'Economic and Financial Aspects of Nuclear Power Programmes' held in Manila, 25-29 August, 1997. The workshop addressed mainly the issues, options, strategies and problems of financing power projects in developing countries. The workshop was useful in identifying problems and alternatives available for their solution. Bangladesh Government has taken a decision to expedite implementation of the Nuclear Power Project. An Expert Group Meeting with the IAEA was held in Bangladesh in December 1997. A Time-Bound Action Programme for the pre-implementation phase of the project was drawn up jointly with the IAEA delineating the scope of the work. Bangladesh is in the process of implementing Nuclear Power Project. Major contributions of RCA in this regard include regional cooperation for exchange of information, capacity building in energy and electricity planning, identification of barriers to implementation of nuclear power project, etc.

**2. Tracer Technology and Nucleonic Control System (RAS/92/073)**

By participating in the RCA programme, BAEC has been able to achieve manpower development and technical capability in tracer technique through receiving equipment, training and expert services. In line with RCA, an IAEA TC project on "Application of tracer technology in Industry" has been approved in 1997-98 and under this project two expert services and a good number of equipment have been received. Two members of the group participated in the RCA training workshop on tracer technology in oilfield studies for secondary and tertiary recoveries at Tianjin and Beijing, China 16-24 June, 1997. A national seminar/workshop on "Application of Tracer Technology in Industry" was organized on 11-13 March, 1997 and it was participated by fifty participants from government and private sectors.

Two participants attended the Regional (RCA) training course on Radioisotope Sealed Sources and Radiotracer Applications in Oil and Gas Industries, Kajang, Malaysia, 18-29 May, 1998. Future programmes include distillation column scanning in petroleum refinery, RTD measurements in different industries and measurement of levels and interfaces in different vessels.

### **3. Strengthening of Radiation Protection Infrastructures (RAS/9/018)**

BAEC is responsible for developing and strengthening the radiation protection infrastructures in Bangladesh. With the enforcement of the Nuclear Safety and Radiation Control Rules, 1997 (SRO No. 205-Law, 97) BAEC has been given the authority of notification, registration licensing and inspection of all radiation sources and installations in the country. BAEC is the only organization in the country rendering occupational exposure monitoring services on national basis. In addition, a comprehensive environmental radioactivity monitoring programme in air, water, soil and foodstuffs is in progress adopting internationally acceptable protocol. BAEC has participated in the IAEA/RCA Coordinated Research Programme (CRP) on Reference Asian Man, Phase-2. The objective of the Programme is to establish a Asian Reference Man for radiation protection purposes. A CRP entitled "Ingestion and organ Content of Trace Elements of Importance in radiological protection" (RC No. 9171/RO) is in progress. A Central Waste Processing and Storage Facility" for radioactive wastes is being constructed at the Atomic Energy Research Establishment (AERE) at a cost of Tk.712.51 lakh (US\$ 1.5 million). Last year 1997 eight members of the group participated in different RCA events like national seminars, project formulation meetings, training courses, workshops and National Coordinators meeting on different aspects of radiation protection.

### **4. Non-destructive Testing (RAS/02/073)**

BAEC is pursuing R&D, services and training in the different fields of NDT. Current R&D activities are being conducted in collaboration with the Local universities and include development of soft ware named 'Instant Radiography' for industrial radiographer. A number of training courses has been conducted. These include (i) Ultrasonic testing (3-29, May 1997), (ii) Ultrasonic testing level-2 (8-26, June 1997), (iii) Magnetic Particle Testing Level-2 (17-28, August 1997), (iv) Liquid Penetrant Testing Level-2 (14-25, September 1997), (v) NDT for Concrete 30 November-15 December 1997). In all about 56 organizations participated in different courses with around 90 participants of which 50 could qualify for certification. IAEA expert Mr. Kunio Terada of Japan worked as a IAEA expert for the national training course on NDT of Concrete, 3 November-6 December 1997.

### **5. Nuclear and Nuclear-related Analytical Techniques (RAS/92/073)**

The main objectives of the project include research and technological development and demonstration programmes to monitor water resources problem, air and marine pollution and health-related clinical chemistry to improve the quality of

life and development of skilled manpower in nuclear and nuclear related analytical techniques. The programme includes research and demonstration programmes, analytical services and “inner comparison studies of IAEA Secondary Reference Materials” of various origins applying nuclear and nuclear-related analytical techniques like PIXE, XRE, TXRF, PIGE, NAA, AAS and Computerized Electro-Chemical techniques. The research group in this programme has measured the levels of Lead in the size fractionated aerosol which confirmed that the levels of Lead in Dhaka City, Bangladesh are among the World’s highest during the dry season with levels falling during the periods of the medium and heavy rainfall. The group is also involved in biomonitoring of chemical pollutants in the terrestrial environment (moss, lichen) under IAEA Coordinated Research Programme. One Scientist attended the “Regional Training Course on Nuclear Analytical Techniques in Water Quality Monitoring at Ching Mai, Thailand, 03-21 November 1997.” Two scientists attended the Regional Training on “Advanced Nuclear Analytical Techniques in Environmental Impact from Industry”, Tokyo and Tokai, Japan, March 9-20, 1998. By participating in the RCA programme sustainable laboratory facilities have been established.

**6. Distance Education Project (RAS/0/022)**

An education programme named “Distance Assisted Training Programme for Nuclear Medicine Technologists” was started under AUS, AID (Australian Agency for International Development) and IAEA in 1992. A BAEC participant attended an RCA meeting in Sydney in 1993. A course was started in 1996 and seven technologists from NMI and three technologists from NMC took part in the course. In February 1997, two IAEA experts visited under the RCA programme and delivered lectures on distance education programme to concerned participants. It was decided during the expert visit that the course materials will be sent to different NMC’s where respective Director will act as Course Supervisor.

**7. Radiation Sterilization of Tissue Grafts (RAS/7/008)**

The objective of the present research and development activities on Tissue Banking in Bangladesh is to establish a full fledged Tissue Bank (Bangladesh National Tissue Bank) to cater for the needs of various tissue grafts and surgical replacements. Activities included collection, preparation, preservation and supply of radiation sterilized human tissue allografts (amnion membrane, bone, dura mater, tendon, heart valves etc.) for safe clinical uses in rehabilitative surgery. Techniques of the preparation of sterile amnion membrane grafts and bone grafts have been established. The radiation sterilized amnion membranes and bone grafts are now being supplied regularly to a number of hospitals for the treatment of burn wounds, leprotic ulcers, bed sores and traumatic open wounds patients (used as

temporary biological dressing). A project Concept Paper on Tissue Bank under Government of Bangladesh funding has been submitted by the Bangladesh Atomic Energy Commission for consideration. It is hoped that the project will make sustainable impact in promoting self reliance in tissue banking. This year one participant attended the Regional Training Workshop, 27 April-8 May 1998 on DLP Singapore, while three other participants are to attend Regional Training, August 1998, Manila, Phillipine; Regional Training Course, October 1998 on DLP Singapore; and Regional Training Course, Nov. 1998, Malaysia QC & Public awareness. Draft Manual on Tissue Banking Procedures have been prepared as per IAEA Standard and sent to IAEA for verification and final approval. TB activities have been expanded to different hospitals and clinics.

#### **8. Radiation Technology (RAS/92/073)**

The main objectives in the food preservation and medical sterilization have already been achieved during the second phase (1992-96). The objectives in other sub-areas of the Radiation Technology such as polymer modification, surface coatings, curing, radiation vulcanization of natural rubber latex (RVNRL) have been fulfilled to some extent through creating required laboratory infrastructure and it is expected that the objectives may be fully met in the next five years phase starting from 1997.

One participant attended the Advisory Group Meeting (EAGM) held in Jakarta, Indonesia during July 21-25, 1997. Future programme includes setting up of a Pilot Plant for radiation processing of materials. A Project Concept Paper on "Applications of Radiation Processing Technology" at a cost of Tk.1635 lakh (US\$3.5 million) has been submitted to the government of Bangladesh and the project has already been approved by the Inter Ministerial Meeting (IMM) of the Planning Commission.

#### **9. Nuclear Information System (RAS/0/019)**

The main objective is to develop a "Nuclear Information System" in the region under the perview of INIS (International Nuclear Information System). For this purpose, a small set up has been developed in the AERE, Savar consisting of relevant hardware and software components. Available software for all kinds of activities related to the project are in use. The system has been upgraded with new versions of the WINSPIRS and WINFIBRE software as received from the IAEA. The CD-ROM based INIS database has also been updated as new and updated database has been received from the IAEA. A batch of input records with the R&D works of the BAEC scientists have been prepared employing the WINFIBRE software. The records have been checked, verified and validated with

the software. Later, the records have been sent electronically to the IAEA computer for merging with the main database. Services are being offered to the scientists and end-users on information retrieval and dissemination of output products.

**10. Repair, Maintenance and Upgradation of Medical Equipment (RAS/4/008)**

The objective of the project is to develop local technical expertise in the field of repair/maintenance of Medical instruments, Quality Control and Quality Assurance of nuclear medical instruments and Upgrading of Medical Equipment including Analogue Gamma Cameras. In the year 1997, forty two different types of Nuclear and Medical equipment of BAEC establishments were repaired in the Institute of Electronics. Supplementary technical support to the RCA Project on "Maintenance of Nuclear Instruments RAS/4/008" IAEA Introduced a TC Project on "Repair/maintenance and Upgradation of Medical Equipment including Analogue Gamma Camera (BGD/6/014)", in the Member States. Under this project, BAEC received a Scientific Visit of two weeks and a Fellowship (three months) on "Upgradation of Analogue Gamma Cameras" along with three Interface cards and three Dongles from IAEA. With the help of these, three Gamma Cameras have been upgraded at three different NMC's namely those in Dhaka, Mymensingh and Khulna.

**11. Improvement of Grain-legume Rhizobium Symbiosis to Fix Atmospheric Nitrogen (RAS/5/021)**

Biological nitrogen fixation (BNF) potentials of eight leguminous crops have been determined using N isotope dilution technique. A month long duration training course was organized to educate 356 extension personnel, (106 district and thana level officers and 250 block supervisors) and 3000 farmers in 20 batches during November 8 to December 21, 1997. A training manual on use of rhizobial inoculant (in Bengali) entitled "Jeebanu Sar : Parichiti Prayog" (bio-fertilizer – Introduction and application) was published in December, 1997. Future programmes include: Training of extension personnel and farmers; Extensive demonstration trial on rhizobial inoculants at every block of legume growing area; development of documentary short film and a film strip on use and performance of biofertilizers.

**12. Thematic Programme on Health Care RAS/6/028**

Under this programme sub-project coordinator attended the National Coordinators meeting held in Mumbai, India 16-20 March, 1998 in which an analysis of the status of nuclear medicine practice with respect to various projects in the thematic

health care programme was made. Priority areas were identified. One participant attended a RCA Training course on Myocardial Perfusion Scintigraphy and Viability held in Sydney, Australia July 19-23, 1998 and another participant has been selected for attending the training course on treatment of thyroid cancer with I-131. Arrangements are being made for holding different events as per recommendations of the National Coordinators' Meeting held in Mumbai, India.

**Mr. Chairman,  
Ladies and Gentlemen**

Bangladesh has benefited from various RCA projects in several ways as follows:

- a) The R & D infrastructures has been strengthened through development of human resource and upgradation of laboratories;
- b) Exchange of information and experience on a regional basis has helped innovative application of results of R&D in different sectors of economy;
- c) Expert services have helped in acquisition of technology and access to information which are useful in orienting R&D programmes compatible with the needs and priorities of national development; and
- d) Finally linkages have been established with the relevant agencies in the public and private sectors as well as with institutions in other RCA countries, thereby creating an atmosphere for optimum utilization of R & D activities in peaceful application of Nuclear Energy and Technologies.

Bangladesh finds the RCA to be a useful Forum for undertaking coordinated projects on a regional basis, where problems confronting development have many features in common. Bangladesh, therefore, attaches great importance to the scopes for pooling of expertise, knowledge and information under RCA and hopes that its activities would not only continue, but be expanded to meet the challenge of 21<sup>st</sup> Century. Thanks.

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**Country Statement of the People's Republic of China**  
**The Twenty-Seventh General Conference Meeting**  
**of Representatives of the RCA Member States**  
**23 September 1998, Vienna, Austria**

Mr. Chairman, Distinguished Delegates, Ladies and Gentlemen,

On behalf of the Chinese delegation, I would like to express our sincere congratulation to the Chairman of the 27th General Conference Meeting of Representatives of the RCA Member States, held today 23, September 1998. I am convinced, that under your wise guidance and your able leadership this important meeting will be successfully meet its objectives. Secondly, please let us to express our appreciation to the government of New Zealand for the warmest hospitality during the 20th Working Group Meeting.

China has been a member of the RCA since 1985 and has benefited from RCA activities in a number of areas. China also contributed her expertise, experience and knowledge for the development of this region. I wish to express our gratitude to the IAEA, UNDP, donor countries, RCA Coordinator and all others who have contributed to the success of the RCA.

Now we are facing the new millennium. RCA just congratulated the Silver Jubilee Year. Looking into the future of RCA, We need promote the application of nuclear science and technology to solve following important task: Security and safety of food and nutrition, Health care, Industrial Development, Energy Development, Environment care and protection. I think, in the new century, RCA will

do her best for the era of Knowledge-based economy and information economy.

A brief summary of activities which have been implemented during the past year, in connection with their impacts to the development of China is given as follows:

### Regional Industrial-Environmental Project.

#### 1. Tracer Technique Application

Tracer technique for oil field development was used for Dagang, Huabei and Zhongyuan oil fields for upgrading oil production.

The RTC on Regional Database on Geothermal Waters was held in Linchuan, Jiangxi, from 1-12 June 1998. Hosted by East China Geological Institute. 8 participants attended.

#### 2. Nucleonic Control System (NCS)

In China, steel, paper and many other industries are still used the NCS for routine production process.

A Cobalt-60 Container Scanner (TC-SCAN) and an electron accelerator container scanner (TH-SCAN) was developed in Tsinghua University, Beijing. They can be used for boundary customs, seaports, airports and railway stations for drugs, arms and conventional contraband inspection.

#### 3. Radiation Processing

Now there are more than sixty  $^{60}\text{Co}$   $\gamma$  facilities and 46 Industrial EB Accelerators has been in operation in China. The total installed capacities are 12,500 Kci and 2000 KW respectively.

New  $^{60}\text{Co}$   $\gamma$  facilities are put in to operation smoothly, the latest one was Mianyang Irradiation Center, Sichuan Province. Owned by Chinese Academy of Engineering Physics, was in operation in March 1998. First loading of  $^{60}\text{Co}$  was 200 Kci. This is also a multipurpose facility.

The Radcure Processing Application in China is still impressive. The throughput of radiation crosslinking products was more than one thousand million RMB Yuan in 1997. Radiation Crosslinked wire, cable and shrinkable materials are widely used in China, this is a matured technology, and also big economic-social impact technology.

### Radiation Curing

A Journal "Radcure Newsletter" (Quarterly) was published since 1997.

A National Training Workshop on Radiation Curing Technique was held in Kunming, Yunnan, 31 July-4 August 1998. The Radcure China was the host. Participants 106, including 55 from industry, 7 from foreign joint ventures. 10 Lectures presented. A Radcure Industry Forum also held.

A national Workshop on UV Curing painting and monomer quality standard will be held in 4th Quarter 1998.

In October 1999, Radcure China Annual Meeting, National Radcure Symposium and Radcure Exhibition will be held in Hangzhou, Zhejiang province, China.

Now, the Radcure Info Network (China) has 102 end-users and institutes.

### Radiation Engineering

The National workshop on Radiation Processing Materials was held from 10-13 Sept. 1998 in Wuxi, Jiangsu, China. The Radiation Processing Committee, China Isotope and Radiation Association was the host.

The National Workshop on New Advance in Radiation Chemistry and Radiation Processing will be held in Changchun, Jilin province, China, in third quarter 1999. The Changchun Institute of Applied Chemistry, Academia Sinica and The Changchun Thermoshrinkable Materials Co. Ltd. and the China Isotope & Radiation Association will be the host.

We are very interested on following titles:

Modification of materials by Ion Treatment for Industrial Application.

Radiation Processing of Chitin/Chitosan for Biomedical Application. Study on degradation and crosslinking behaviours of Chitin/Chitosan. Study on the effect of ion beams, electron and gamma rays with various LET on the behaviors and properties of Chitin/Chitosan.

Radiation Processing for agrowaste effective utilization.

Rice straw and short cotton linters are proposed.

Radiation Processing Indigenous Natural Polymers.

## Radiation and Environment

The Regional Workshop on Radiation Treatment of Waste water and drinking water will be held in Shanghai from 19-23 October 1998, Shanghai University will be the host, the lecturers from Agency, US, Austria and China, more than ten participants will be attended from RCA countries.

A National Workshop on Flue Gas Treatment using EB Accelerator was held in Beijing from 5-6 Aug. 1998. Hosted by China Isotope and Radiation Association (CIRA) and Academia Sinica. more than 30 participants from ministries, institutes, universities and companies. The workshop discussed the recent national and international advancement of this technique, suggest that in China need more EB Flue Gas Treatment facilities. Now in China, there are 2000 coal-fire power plants, and there are almost no desulfurization process in these plants.

In Shanghai Baoshan Iron & Steel (Group) Company, A feasibility study on 175 MW power plant Flue Gas Treatment by EB Accelerator is under serious consideration.

A Flue gas EB Radiation Treatment Plant for removing sulfur dioxide has been established in Chengdu, Sichuan, China. This is Japan-China bilateral cooperation Project, IAEA also supported this project. The Japanese Ebara Company was the main investor. This Chengdu plant was completed on September 1997 and on May 1998, finished the test operation. Now, the Chengdu EB desulfurization plant is a demonstration plant for this technique. Many Chinese power plant staff and a few foreign guest (Ukraine) visited this plant.

It is proposed an International Meeting on EB Flue Gas Treatment will be held in Beijing in the first half of 1999. We welcome IAEA experts and any other countries experts attend this meeting. And if possible, we proposed this meeting co-sponsored by IAEA.

#### 4. NDT

In 1998, we will strengthen the management of regulation and standards of NDT.

The National Training Course on Nuclear Industry NDT Level III personnels is proposed held in the second quarter 1999 in Wuhan, Hubei province.

The first training course on Application of VT in nuclear industry was held in Shanghai, April 1998.

The National Symposium on Accelerator NDT was held in Lushan, May 1998.

#### 5. National Analytical Technique (NAT)

The 1998 International conference on Nuclear Analytical Methods in Life Sciences (NAMLS) will be held in 26-31 October 1998 in Beijing, hosted by the China Institute of Atomic Energy (CIAE), more 60 foreign, 20 domestic participants will be attended.

The National Workshop on Modern Science and Technique Application in Archaeology will be held in Beijing, in 28 Sept. 1998.

The National Symposium on Nuclear Analytical Chemistry was held in Zhangjiajie, Hunan from 21-25 Aug. 1998, eighty participants.

The National Meeting Certified Reference Materials will be held in Beijing from 6-10 Oct. 1998.

The National Meeting on Activatin Analysis will be held in Nanjing, October 1999.

#### The New UNDP/RCA/IAEA Project (RAS/97/023)

China strongly support all these five subprojects.

- 1) Air pollution and its trends.
- 2) Management of the Marine Coastal Environment and its Pollution.
- 3) Access to clean Drinking Water.
- 4) Electronic Networking and Outreach, and
- 5) Clean and Energy Efficient Production Process.

We are interested on red tide, Air Pollution-NAA, RCA-Home Page, groundwater study and many others.

#### Food Irradiation

In 1998, China had irradiated foods about 50,000 tonnes. The main products are garlic (about 40,000 tonnes), dehydrated vegetables, spices and health foods. One marketing test of irradiated foods was finished in Beijing, February 1998. The consumer's response are good.

The second RCM on Development of Safe, the shelf-stable and Ready-to-eat food through high-dose irradiation processing was held in 4-8 May 1998 in Beijing.

The National Workshop on Food Irradiation was held in Chengdu, from 10-14 May 1998. The Sichuan Institute for Nuclear Technique Application was the host, cosponsored by the Ministry of Science and Technology (MST), China Atomic Energy Authority (CAEA) and China Isotope and Radiation Association (CIRA). More than 100 persons attended.

The National Training Course on Food Irradiation will be held in November 1998 at Zhengzhou.

### Nuclear Agriculture

The RCA Project Formulation Meeting (PFM) on Nuclear Agriculture was held from 2-6 March 1998, at IAAE/CAAS, Beijing, China. 17 experts from ten RCA member states attended, including 9 from foreign countries, 8 from host country.

Following four projects were recommended for this thematic programme "Nuclear Techniques for Sustainable Agriculture".

1. Enhancement of genetic diversity for improvement of food, oils and pulse crops through mutation techniques combined with biotechnology;

2. Harmonization of regulations on and commercialization of irradiated food;

3. The use of nuclear and related techniques to improve animal productivity and reproductive performance.

4. Monitoring of pesticides and Agrochemical residues in food and Environment using chromatographic, Isotopic and other rapid techniques.

We are waiting the last results for these proposals.

Form 31 Aug.-11 Sept. 1998, the IAAE/CAAS in Beijing hosted the 4th International Training Course on Nuclear Technique Application in Agriculture, the main title was pesticides fate in eco-environment, more than ten participants attended.

The symposium on Mutation Breeding will be held in Nanjing from 6-9 Oct. 1998. The Chinese Society of Nuclear Agriculture will be the host.

### Nuclear Medicine and Health Care

China support all the nuclear medicine and health care projects.

The RCM on Diagnosis and Management of Patients with unexplained back pain using bone SPECT was held 2-4 March 1998 in Shanghai.

The first Sino-Korean Nuclear Medicine Conference will be held in Beijing from 8-10 October 1998.

The National Symposium on Nuclear Cardiology will be held in Kunming, Yunnan, China from 15-21 Nov. 1998.

The National Training Course on Endocrinology and diabetic nephropathy will be held from 2-12 Nov. 1998 in Shanghai.

The National Workshop on Cancer Treatment in Nuclear Medicine was held in Chengdu, Sichuan Province, may 1998.

The National Workshop on myocardial perfusion SPECT Imaging ( $^{99m}\text{Tc-MIBI}$ ) will be held in Beijing, October 1999. Fuwai Hospital/CAMS will be the host.

The National Workshop on Breast cancer Diagnosis will be held in fourth quarter 1999.

Regarding RAS/7/008 Radiation Sterilization of Tissue Grafts.

We are participated following activities: Delivery of curriculum to tissue bank operators, TQS in Producing Radiation sterilized Tissue.

China support the new project on Isotope evaluations to add value to nutrition intervention.

### Radiation Protection

The RCM on Intercomparison of In-Vivo Counting Systems Using a Reference Asian Phantom will be held in Taiyuan, China from 2-6 November 1998.

The RCM for the CRP on Ingestion and Organ Content of trace elements of importance in radio logical protection was held from 15-19 June 1998 in Taiyuan, The China Institute for Radiation Protection (CIRP) was the host.

The RTC on techniques for external and internal dose assessment will be held from 12-30 Oct. 1998 in Taiyuan and Beijing, CIRP and CIAE will be the host.

Workshop to Review Waste Inventory, Waste Characteristic and Reference Site Candidates (RAS/4/016) was held in Shanghai from 7-9 July 1997. China would like to do some training-demonstration activity for Asian Pacific Region and the Shanghai LILW pre-disposal site can be considered as a candidate of this project's RRU.

### Energy. Research Reactor

In China, the nuclear power projects are actively processed. Qinshan and Daya Bay NPPs are in operation very well. Qinshan phase two and Lianyungang NPPs are under construction, China actively participated all the Energy and Nuclear Power planning RCA activities (Economic and Financial aspects and others).

China also interested on Research Reactor Utilization project, neutron scattering and application, neutron transmutation doping and many others.

We support the Japanese proposed project on technology transfer and quality control of manufacturing Co-60 source for radiation brachytherapy and would like the Chengdu reactor for this production.

We are facing the new century, now RCA is matured, In the next 25 year, we hope, RCA will play a significant role, target the regional market, oriented to the end users, identifying problems and solving them using existing regional capacity, Solve common problems not only at the national level, but regionally as well. Particularly the transboundary problem and regional trade. It is inevitable that the RCA will face new challenges and opportunities in the new century as before.

China would like to support RCA as before, 50,000 US\$ cash contribution will be submitted in the future year. We also actively support and host some RCA activities in China as contribution-in-kind. And also would like to contribution Chinese experts, facilities and knowledge servicing the Region. Some institutes and universities can

be considered as special RRU for RCA (as a example, CIAE as NAA Neutron Activation Analysis RRU).

China will continue to contribute towards these broad objectives as in the past. And I would like to reaffirm our continued strong support for the RCA projects.

## **COUNTRY STATEMENT - INDONESIA**

AT THE 27<sup>th</sup> GENERAL CONFERENCE OF THE REPRESENTATIVE OF THE RCA MEMBER STATES .

Vienna, Austria, September 1998.

Mr. Chairman, Distinguished Delegates, Ladies and Gentlemen,

On behalf of the Indonesian Delegation I wish to extend our sincere congratulations to the Chairman of this 27<sup>th</sup> General Conference of the Representatives of the RCA Member States, held today. I am convinced that under your wise guidance and your able leadership, this Meeting will successfully meet its objectives.

It is the view of my Delegation, that the RCA programmes of activities have significantly contributed towards the progress of peaceful application of nuclear science and technology in the Member States, in particular in the fields of agriculture, animal husbandry, health/medicine and industry. I wish to recall that Indonesia has maintained its active participation in the RCA programmes since the beginning, and intends to remain an active member in the future. My Delegation is pleased to note that Indonesia has gained great benefits from the RCA programmes.

Let me now present a brief summary of activities that have been carried out in my country in the framework of the RCA programme.

### **1. Regional Industrial and Environmental Projects**

#### **1.1. Radiation Technology**

1.1.1. The UNDP/IAEA/RCA Project on the Use of Isotopes and Radiation to Strengthen Technology and Support Environmentally Sustainable Development (RAS/92/073) was closed in 1997. This project have made valuable contribution to the man power development and to the promotion of the application of the radiation technology in Indonesia. The achievements of this project have been reported in the previous General Conference of the Representative of the RCA Member States and RCA Working Group meetings.

1.1.2. The last important contribution of this project in promoting radiation technology is the establishment a 500 kW, 150 ka EBM at PT Gadjah Tunggal (a private company) to process automobile tire. In addition, two Linac Accelerator with 10 mV, 1 mA capacity will be installed in this year for immigration inspection purposes.

#### **1.2 Non-Destructive Examination (NDE)**

1.2.1. BATAN continuos actively promotes the use NDE technology through seminars, workshops and training course for practitioners and decision makers.

- 1.2.2. The NDE programme in Indonesia has been mainly concentrated on training. In between April to September 1998, there had been 392 participants attended training on NDE Level I and II of RT. Meanwhile, 65 participants have attended training on UT and Surface Methods.
- 1.2.3. An inspection of void detection of steel structure on concrete was carried out at Wisma Hayam Wuruk Building in August 1998.
- 1.2.4. An inspection of defect on aircraft components was carried out in May-August 1998.
- 1.2.5. For the next activities BATAN proposes:
  - A National Training Course on Surface Method level III which will be held in August/September 1999. We expect that the Agency can provide 1-2 experts.
  - A two-day National Seminar on Advanced NDE and Remaining Assessment which is scheduled to be held in October 1999. We expect that the Agency can provide 1-2 experts.
  - Under RAS/8/077-003, there was a plan to conduct a RCA Regional Training Course on NDT Inspection in Petroleum Industry on 22-26 June, 1998. However, due to unfavorable social and political situation in Indonesia, this course was postponed. The Agency suggested to carry out this course on 7 - 11 November 1998, but the counterpart proposed it the first week of December 1998.
  - To carry out ASNT training course (accreditation of license) for level II & III of RT in November 1999.

### **1.3. Tracer Industries and Nucleonic Control Systems.**

- 1.3.1. Seminar and demonstration on column scanning have been done at Cilacap Petroleum Refinery Plant on 20 - 25 April 1998 by IAEA Expert Mr. Tom Kluss (Australia) and Mr. Siripone Chueinta (Thailand). There were 7 people from private company participated in these activities.
- 1.3.2. Two persons (1 from CAIR-Batan and 1 from Pertamina Oil Stated Company) participated in Regional Training Course on Radiotracers Application in Oil and Gas Industries, Malaysia, 18 - 29 May 1998.
- 1.3.3. Mr. Puguh Martyasa participated in Regional Training Workshop on Nucleonic Instrumentation, New Zealand, 6 - 10 March 1997.
- 1.3.4. There was a plan to receive an expert mission of Mr. Wallace Ladders. Unfortunately, the Agency postponed Mr. Ladders' mission. We disappointed since it is not only because we need expert for tracer in oil industry but also we have prepared.
- 1.3.5. A determination of leak location in the buried pipe had been carried out at Malang, East Java in June 1998.

1.3.6. A study on groundwater movement has been done at Freeport Cooper Mining, Irian Jaya.

1.3.6. Following are the future activities:

- Leak detection for 150 kV underground cable.
- Column scanning investigation at Cilacap Oil Refinery in November 1998.
- Study on residence time distribution at Pongkor Gold Mining, West Java in June 1999.
- Leak detection and gas flow measurement at Pusri Fertilizer Plant in August 1999.
- Study on residence time distribution at Pongkor Gold Mining, West Java, December 1998.

#### **1.4. Nuclear Analytical Techniques.**

1.4.1. Indonesia has benefited from the Joint UNDP/RCA/IAEA Project RAS/92//073, Nuclear Analytical Techniques sub-project, especially in technical development of human resources.

1.4.2. Indonesia participates in the Coordinated Programme: Applied research on air pollution using nuclear related analytical techniques in Asia and Pacific Region (RCA), under contract No. 8543 Regular Budget Fund.

1.4.2. In the Country Statement of the 20th RCA Working Group Meeting, we expressed our interest to host Training Workshop on Chemometrics and Advanced Statistical Techniques which was scheduled to be held on the first quarter of 1998. The Nuclear Analytical Techniques Sub Project that was focused on its activities primarily on the use nuclear analytical techniques for monitoring and study of air pollution now is completed. Now, Indonesia participates in another new sub project with similar objectives namely Air Pollution and Its Trends. In relation to this activity, there will be a Chemometric workshop in the early 1999. Batan is interested in hosting this workshop.

1.4.3. Batan is willing to host the end of Project Conference for the Air Pollution Sub-Project.

## **2. Medical and Biological Applications of Nuclear Techniques**

### **2.1 Thematic Programme on Health Care.**

2.1.1. Dr. Subur Budiman attended National Coordinator Meeting, Mumbai, India, March 1998. At this meeting, he presented current status of Nuclear Medicine in Indonesia.

2.1.2. Scintimammography Prone Breast Positioning Pads from the IAEA has been received.

2.1.3. As has been agreed during the 20th RCA Working Group Meeting, New Zealand that Indonesia is the Led Country for Thematic Programme on Health Care (RAS/6/028). A project proposal has been sent to the Agency. So far, there has been no response yet from the participating countries.

## **2.2 Radiation Sterilization of Biological Tissue Graft.**

- 2.2.1. Dissemination of information on donor selection criteria and demo's on application of radiation sterilized bones allografts as well as bone xenografts to several hospitals is on progress. Several hospitals in Jakarta have routinely used bone allografts that are produced by Batan Research Tissue Bank (BRTB) with good results. R & D on the application of BRTB products at Fatmawati Hospitals are continuing. At present, radiation sterilized human bone as well as lyophilized bovine cancellous have been implanted for more than 50 patients at Fatmawati Hospital in Jakarta. Preliminary results show that none of them indicates any symptoms of rejection. In June 1998, BRTB donated 200 pieces of radiation sterilized amnion membranes to Cipto Mangunkusumo Hospital in Jakarta. Those membranes have been applied for burn patients.
- 2.2.2. Two local seminars have been done in 1998. One at Pluit Hospitals which was attended by 30 Medical Doctors and Nurses and another one was done at the University of Indonesia, attended by 40 Master Degree Students and Lecturers.
- 2.2.2. Quality Assurance and Quality Control programme in Tissue Banking have been implemented at BRTB. The procedure as well as Quality Manual of BRTB have been sent to the IAEA for counter check. IAEA's Multi Media Distance Learning Package on Tissue Banking have been discussed among BRTB's staffs.
- 2.2.3. There are several staffs participated in the regional events. Ms. Febrida Anas attended RTC on Distance Learning Package in Singapore in 1997 and this course will be continued in November 1998; Mr. Basril Abbas participated in the IAEA/RCA Training Course on Training of the Trainers on Distance Learning Package in Tissue Banking, Singapore, April 1998; Mr. Abdul Aziz Djalal MD attended RTC on Radiation Sterilization Methodology for Tissue Allografts, Manila, August, 1998.
- 2.2.4. DR. Nazly Hilmy will attend IAEA/RCA Meeting on Radiation Sterilization of Tissue Graft and the 7th International Conference on Tissue Banking which will be held in Kuala Lumpur, November 1998. Three scientific papers will be presented by BRTB in this seminar. Ms. Febrida Anas will participate in joint TC on Multimedia Distance Learning Package on Tissue Banking, Singapore, November 1998.

## **2.3. Nuclear Instrument Maintenance.**

- 2.3.1. There was no important technical activities in the area of Nuclear Instrumentation Maintenance during the last six months.

## **2.4. Public Acceptance and Trade in Irradiated Food.**

- 2.4.1. Ms. Munsiah Maha and DR. Mulyo Sidik participated in FAO/IAEA(RCA)/ICGFI Workshop on Harmonization of Procedures and Regulations on Food Irradiation for Asia and the Pacific, Seoul, Republic of Korea, 27-29 April 1998.
- 2.4.2. As has been agreed in 20th RCA Working Group Meeting, New Zealand, that Public Acceptance and Trade in Irradiated Food (RAS/0/22) project will be closed.
- 2.4.3. In Indonesia the activity of this project is continued by dissemination of irradiated food to the community around Jakarta. This includes sending questionnaires to get feedback from the community and through internet. This activity is funded by the Indonesian Government.

## **3. Research Reactor Utilization and Energy and Nuclear Power Planning.**

### **3.1. Research Reactor Utilization.**

- 3.1.1. The RSG-GAS 30 MW research reactor and its facilities located at Serpong, Indonesia, which were established as a center of excellence in Asia and the Pacific region in 1989, are open to those interested in doing R&D activities.
- 3.1.2. Some efforts have been made to increase the availability and reliability of irradiation and experimental facilities and to upgrade the manpower capability.
- 3.1.3. Establishing computer code system for design, analysis and operating of the reactor and its systems by 1997 to support safe and optimal operation and utilization. Improvement on in-core fuel management to get better core performance and fuel cost reduction.
- 3.1.4. Mr. Hudi Hastowo (RAS/0/024 Project Coordinator) attended Project Formulation Meeting on Research Reactor that was held in Taejon, Republic of Korea, 23-27 March 1998.

### **3.2. Energy and Nuclear Power Planning.**

- 3.2.1. Mr. Adiwardojo (RAS/0/024 Project Coordinator) attended Project Formulation Meeting on Energy that was held in Taejon, Republic of Korea, 23-27 March 1998.

### **3.3. Nuclear Power Plant.**

- 3.3.1. Two Batan staffs attended IAEA Regional Training Workshop on WASP IV, that was held in KAERI, 13-24 October 1997. This training is very useful in developing our energy planning based on the latest WASP IV.

- 3.3.2. Mr. Adiwardojo participated in the National Coordinator Meeting that was held in Hanoi, Vietnam on 16-20 February 1998. This meeting has successfully met all its objectives and very useful in developing our nuclear power program.
- 3.3.3. One Batan staff has participated in the IAEA Regional (RCA) Training Course on Comparative Assessment of Nuclear Power and Other Energy Sources in Support of Sustainable Energy Development, KAERI, 8 June - 3 July 1998.
- 3.3.4. The DECADES case studies addressing issues related to comparative assessment in planning and decision making for electricity systems are being carried out by National Organizations. That work will continue in 1999 and 2000 by carrying out case study focusing on the DECADES data bases and DECPAC. Under RAS/0/023, Indonesia is interested in hosting RTC on the Use of the Tools To Assess the Cost Externalities Associated With Different Energy Options in March 2000.

#### **4. Radiation Protection Projects.**

##### **4.1. Enhancement and Harmonization of Radiation Protection Project.**

- 4.1.1. BATAN has involved in Enhancement and Harmonization of Radiation Protection Project (RAS/9/018) from the beginning.
- 4.1.2. During Project Formulation Meeting, it has been agreed that Indonesia to be host of three activities namely: Regional Training Workshop on Notification, Authorization, Inspection and Enforcement, 29 June - 3 July 1998; Midterm Review in 2000; and Training Course on Optimization of Collective Dose from the Use of Diagnostic Radiography including QA System and Dose Assessment in 2001.
- 4.1.3. Under RAS/9/018-007, Indonesia supposed to be the host of Regional Training Workshop on Notification, Authorization, Inspection and Enforcement, 29 June - 3 July 1998. Unfortunately, this programme was canceled and moved to Thailand.
- 4.1.4. Mr. Eri Hiswara attended IAEA/RCA Expert Meeting on Intercomparison for Personal Dosimetry, Mumbai, India, 1 - 5 December 1997.
- 4.1.5. The implementation of RAS/9/018, so far only in the form of training course and intercomparison program. In future, it is necessary to include sending expert, equipment and in the job training activities.
- 4.1.6. Republic of Korea has committed to be the host and funded Expert Advisory Group Meeting on Establishment of Regional Environmental Monitoring Network in 1998. Although this country suffer from economic crisis, Indonesia expect that this country still can keep this commitment, or the Agency could finance this activity.

4.1.7. Since social and political situation has back to a normal condition, Indonesia expect that all activities that are planned to be carry out in Indonesia can be done as scheduled.

**5. International Nuclear Information System (INS).**

5.1. The project RAS/0/019 will be finished in 1996. The next project will be started on 1997 for 5 years. Considering the important of this project, BATAN will joint it.

5.2. There was no important technical activities in the area of INS. during the last six months.

**6. Joint UNDP/RCA/IAEA Project on the Better Management of the Environment, Natural Resources and Industrial Growth.**

6.1. BATAN is interested in participating Joint UNDP/RCA/IAEA Project on the Better Management of the Environment, Natural Resources and Industrial Growth Through Isotope and Radiation Technology:

6.2. BATAN has assigned sub-project coordinators. They are namely Mr. Kris Tri Basuki (Marine Coastal Environment); Mr. Zainal Abidin (Access to Clean Drinking Water); Mr. Harjoto (Air Pollution); and Mr. Syamsa Ardisasmita (Electronic Networking & outreach).

6.3. Those assigned coordinators participated in the Project Formulation Meetings that were held in Kuala Lumpur, Malaysia, 9 - 13 March 1998 and in Manila, Philippines, 23 - 27 March 1998.

Mr. Chairman, Ladies and Gentlemen, I thank you for your attention.



## JAPANESE COUNTRY STATEMENT

at

The 27th General Conference Meeting of the RCA

Vienna, 23 September 1998

Mr. Chairman, distinguished delegates, ladies and gentlemen,

On behalf of the Japanese delegation I should like to convey my congratulations to you on your election as Chairman of the 27th General Conference Meeting of the Representative of RCA Member States. Many thanks also go to the IAEA and RCA office for their efforts in steering RCA at a period of transition.

Japan appreciates that RCA has brought about outstanding benefits, not only to the individual Member States, but to the region as a whole. In order for RCA to continue to play such an important role, we have to tackle two major challenges. Firstly, we have a challenge in RCA management. It is necessary to make RCA an even more effective framework for smooth formulation and implementation of projects. To this end, we have been engaged in organisational and operational changes in RCA management, which include introduction of Lead Country system and Project Manager post. For the continued sustainability of RCA, Member States, together with the IAEA, are required to make proactive commitment to even closer involvement in the programming and implementation of RCA project .

Secondly, this region is currently facing an extremely serious financial situation. Japan is not an exception and, therefore, it is difficult for Japan to meet further requests on funding issues. In this situation, all the RCA Member States

should cooperate to focus their endeavors on pursuing more cost effective and efficient implementations of each project. These endeavors may include not only prioritizing future projects but also streamlining the existing projects. At the same time, it is essential to seek an even closer association with other international organisations including the UNDP and the WHO to ensure sound financial basis.

### Japanese Funded Projects

Japan has participated actively in and contributed to such main fields as "Industry and the Environment", "Human Health" and "Radiation Protection".

1. In the field of "Industry and the Environment", Japan has played an important role in the Thematic Programme "Advanced Techniques for Industry" as the Lead Country. Japan, with the help of the IAEA and Member States concerned, intends to continue its contribution to this programme so that the programme meet the present and future needs of the Member States.
2. In the field of "Human Health", initiated by a proposal of Japan, we will continue to extend as much support as possible to such projects as "Radiation Therapy of Cancer" and "Nuclear Medicine". We are very pleased that the project on "Transfer of Technology for the Production of CO-60 Sources for Branchtherapy", after more than 2 years from its approval, is now about to enter on an implementation phase. We appreciate the support of the IAEA, RCA office and others concerned and we expect continuous involvement of the IAEA in this project.
3. With regard to the field of "Radiation Protection", Japan will continue to support the "Strengthening of Radiation Protection Infrastructure Project" with a view to improving nuclear safety in RCA Member States. This has been an ideal and successful project in that most of the Member States deem it useful and are

participating in it.

New Joint UNDP/RCA/IAEA Project "Clean and Energy Efficient Production Process"

We are pleased that the decision has been made on the joint proposal from Japan and Malaysia on "Upgrading of cellulosic agro-wastes to useful products", which was reflected in the Project Formulation Form (PFF), to be included in the New Joint UNDP/RCA/IAEA project's sub project "Clean and Energy Efficient Production Process." We hope that fruitful and successful outcomes can be obtained .

We hope that our cooperation in these areas will lead to successful outcomes and come up to Member States' high expectations .

Finally, Japan should like to express its sincere hope that the RCA will continue to strengthen its cooperation for further development in the Asia and Pacific Region.

(end)



**COUNTRY STATEMENT OF MALAYSIA**  
**27<sup>th</sup> RCA GENERAL CONFERENCE**  
**23<sup>rd</sup> September 1998, VIENNA, AUSTRIA**

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On behalf of the Malaysian delegation I would like to congratulate you, Mr. Chairman, on your election as Chairman of the 27<sup>th</sup> RCA General Conference Meeting.

The Malaysian delegation also take this opportunity to congratulate the IAEA for its successful efforts together with the RCA Member States in securing UNDP funding for the new Joint UNDP/RCA/IAEA project, "Better Management of the Environment, Natural Resources and Industrial Growth through Isotope and Radiation Technology". Malaysia has been actively participating in the RCA programme and this meeting can be assured of our continued support.

It is my pleasure to report that good progress has been made in Malaysia in the implementation of the programme during the year 1997 and 1998, some of which is highlighted below.

#### **Industrial and Environment**

***Non-Destructive Testing:*** The Malaysian Institute for Nuclear Technology Research (MINT) has established a National Centre for Gamma Projector Maintenance to fulfil the need of a new regulation that requires certification of all NDT gamma projectors by an approved maintenance center. Malaysia is extending the benefit of having this facility to the region by hosting a Regional Workshop on Maintenance of X-ray and Gamma Ray Industrial Radiography Apparatus For Safety And Productivity Tests which will be held from 26<sup>th</sup> to 30<sup>th</sup> October this year.

***Tracer Technology:*** The development of TAFLOS for analysing storage tank integrity and COLSCAN for scanning distillation column by the MINT Tracer Group is indicative of the level of internalisation of the technology attained by the group. Both techniques have been used actual industrial plants successfully. Malaysia shared this success with the RCA Member States by hosting the Regional Training Course on Radioisotope Sealed Sources and Radiotracers Applications in Oil and Gas Industry which was held in Malaysia from 18<sup>th</sup> to 29<sup>th</sup> May this year. The RTC also includes field demonstration of the technique in an oil refinery.

***Radiation Technology:*** The semi-industrial pilot plant for the production of radiation vulcanised natural rubber latex (RVNRL) which was commissioned in 1996 has been instrumental in furthering the progress of the project. Using this plant, MINT has despatched over 80 tons of RVNRL to latex product industries in Malaysia and 13 foreign companies. Locally, trial industrial scale production of medical gloves and toy balloons had successfully been carried out.

#### **Medical and Biological Applications of Nuclear Techniques**

***Quality Assurance in Radiation Therapy:*** QA in radiation therapy is now gaining acceptance and recognition in Malaysia. A National Committee on QA in Radiation

Therapy made up of representatives from various relevant agencies is now being established.

***Thematic Health Care Programme:*** Recognition and awareness of the contribution of nuclear medicine to health care in Malaysia has now reached a level that a Nuclear Medicine Society will be established in the near future. This reflects the growing number of professionals, researchers, and practitioners in nuclear medicine in the country and their commitments towards its continued development and progress.

***Radiation Sterilisation of Tissue Grafts:*** the two tissue banks in Malaysia, at Universiti Sains Malaysia Hospital and MINT, combined produced over 5,200 pieces of amnion in 1997. A total of 3,354 pieces of them were used to treat 300 burn patients. During the same year the banks also produced over 1,200 pieces of bones 484 of which were benefited by 100 patients in orthopaedic and maxillofacial surgeries. Malaysia lent its expertise in this area by providing a lecturer to the RTC for the Development of Curriculum for Tissue Bank Operators which was held in Singapore from 3<sup>rd</sup> to 15<sup>th</sup> November last year.

## **Agriculture and Food**

***Public Acceptance and Trade in Irradiated Food:*** Malaysia is the host for the 2<sup>nd</sup> Research Co-ordination Meeting for the CRP on Public Acceptance and Trade in Irradiated Food in Asia and the Pacific which was held from 25<sup>th</sup> to 29<sup>th</sup> August last year.

## **Radiation Protection**

***Strengthening of Radiation Protection Infrastructure:*** Malaysia participated in almost all radiation protection activities carried out last year. Together with the Atomic Energy Licensing Board (AELB) MINT is involved in national training program on radiological safety and health in the country. Malaysia participated in the National Co-ordinators and Project Formulation Meetings which were held in Korea (24<sup>th</sup> - 28<sup>th</sup> February 1997) and hosted the RTC on Radioactive Waste Management, 28<sup>th</sup> September - 18<sup>th</sup> October 1997.

## **Research Reactor Utilisation and Energy-Based Project**

***Energy, Electricity and Nuclear Power Planning:*** Since the integrated energy analysis which was carried out for Malaysia using the early version of ENPEP in 1990 - 1991, no major energy study was conducted using the model but some of the modules (IMPACTS, LDC, WASP III) were used for specific analyses. Even though Malaysia has no national nuclear power program it continues to participate in this activity with the view of keeping abreast with the latest development and for sharing the experience of other RCA Member States.

In conclusion, the RCA has contributed and complimented some of Malaysia's national programs in the development and applications of nuclear science and technology in the country and it will continue to support this regional co-operation program.

# NEW ZEALAND COUNTRY STATEMENT

## 27th RCA GENERAL CONFERENCE MEETING

23rd September 1998, Vienna

New Zealand expresses its thanks to all the participants in the 20th Meeting of Representatives held in Taupo, New Zealand, 30 March to 3 April 1998. The hosting of the meeting at such an important time in the development of the RCA has been a major highlight of our membership.

**Activities** We have remained active in the Thematic Programme on Radiation Protection Infrastructure, particularly with respect to the development of Distance Learning Materials. Dr McEwan attended the Supervisor's Evaluation Meeting in Australia in June. It is our intention to be more involved in the new Thematic Programme on Health Care than in the earlier programme. Mr Rutland attended the National Coordinators' Meeting in India in March. We are seeking funding to be able to assist in evaluating the impact of the programme on nuclear medicine in the Member States. In Agriculture-related projects, Dr Roberts attended as an expert at the Workshop on Harmonisation of Procedures and Regulations on Food Irradiation for Asia and the Pacific in the Republic of Korea in April.

Activities within the new UNDP/RCA/IAEA project remain the main focus for New Zealand involvement in RCA. Expertise has been provided in a number of areas. Most notably, Dr Wallace and Mr Boulton visited Korea, Indonesia and Malaysia to evaluate the potential for Applications of the TLA Technique to Wear and Corrosion in the Petroleum Industry. Dr Barry provided lectures at an RTC in Malaysia on Radioisotope Sealed Sources and Radiotracer Applications in the Oil Gas Industry during May.

Staff resources may make it difficult to play a significant role within the new sub-project on Electronic Networking and Outreach. However we intend to develop our National RCA Homepage within a few weeks.

We will participate fully in the other sub-projects and are the Lead Country for the sub-project on Clean and Energy Efficient Production Processes for Industry. A PFM for this sub-project is being planned for November, to be hosted by Malaysia. Considerable effort will be needed to achieve useful outcomes in this sub-project since it has had such a delayed start as it did not receive UNDP funding. New Zealand remains convinced of the potential importance of this sub-project to efficient, sustainable industrial development in the Region.

**Management and Communication** A number of changes to the way RCA is managed have been agreed in the last two years. New Zealand remains supportive of the concepts that are central to the future management of RCA. These include ownership of projects by Member States and an emphasis on applications driven projects that retain a strong element of training and human resource development.

The management changes are now being implemented. New Zealand hopes that this General

Conference Meeting will consider how successful the implementation has been. The effects of change are most easily seen in the new UNDP/RCA/IAEA project which has had to be initiated under the new management rules. The speed at which RCA has been able to develop and start projects has been disappointing. It is appropriate to ask to what extent the actions of Member States and the Agency in responding to the new management environment have contributed to the slow start and low implementation rate. We are already about 30% through the funding period agreed to by the UNDP. It is New Zealand's opinion that there are communication and implementation issues to be solved before significant damage is done to the effectiveness and image of the RCA.

New Zealand is aware that its financial contributions to the RCA have reduced in each of the last two years. In part, this is because under the rules for financial contributions agreed between the Agency and the contributing Institute in New Zealand, such contributions are classed as 'in-kind'. However New Zealand notes that reducing contributions are a trend for all contributing Member States. This is a warning sign that must be heeded. An effective safeguard against reducing contributions is a strong, active programme which meets the needs of Member States with clear communication between all parties. New Zealand believes that all Member States and the Agency will play their part in meeting this goal.

**PHILIPPINE COUNTRY STATEMENT**  
**27<sup>TH</sup> RCA GENERAL CONFERENCE MEETING**  
**Vienna, Austria**  
**23 September 1998**

Active involvement in the Regional Cooperation Agreement is a pursuit which the country takes pride in. Membership under this regional umbrella has afforded us the chance to fortify regional strengths and to optimize regional resources, while at the same time addressing our peculiar/specialized concerns as individual countries and as a regional bloc.

Under the auspices of the RCA, we are pleased to report the progress of the various projects which the Philippines is participating in.

**PHILIPPINE PARTICIPATION IN RCA ACTIVITIES**

**RAS/97/030 - "Better Management of the Environment, Natural Resources and Industrial Growth Through Isotopes and Radiation"**

The Philippines had the honor to host simultaneously the Project Formulation Meetings of the following first two Subprojects of this Joint UNDP/IAEA/RCA Project on February 23-27, 1998.

**a) Access to Clean Drinking Water**

The Philippines is honored to be designated the lead country in the development of the project proposal for the 1999-2000 cycle. As lead country, the Philippine Project Coordinator attended the Project Committee Meeting in Vienna on July 27-31, 1998.

For the project "Isotope Applications for Improved Drinking Water Resources Management", the water agency collaborator is the Davao Water District; thus, Davao City was identified as the project site for the investigation of groundwater resources, with emphasis on studies of recharge and their vulnerability to pollution. Under this project, a Task Force was constituted by the Philippine Nuclear Research Institute to lead in the implementation of the project and to coordinate with the other agencies of the country involved in the implementation.

We hope to participate at the forthcoming UNDP/IAEA/RCA Regional Field Training on Application of Isotope and Chemical Techniques to Groundwater Problems which will be held in India on November 30 - December 11, 1998.

#### **b) Management of the Marine Coastal Environment and its Pollution**

Likewise, we are honored to have been designated as the Regional Resource Unit for the establishment of a regional database for marine radioactivity. As such, we will draft the questionnaire for this database for the participating countries to accomplish. We will also look into the Monaco's database structure on baseline marine radioactivity which could act as template for this activity.

The Philippines has also offered to serve as Regional Resource Unit for the Component on The Application of Nuclear Techniques to Address Specific Red Tide (Harmful Algal Bloom) Concerns. Information on the plan to hold a formulation meeting in Manila this year to discuss workplan among the interested Member countries will be greatly appreciated.

#### **c) Air Pollution and Trends**

The Philippines attended the Project Formulation Meeting which was held in Malaysia on March 9-13, 1998.

The Philippines was also proposed as the Regional Resource Unit for the XRF technique and as such, we are tasked to prepare a manual. The project utilizes nuclear analytical techniques to generate data on air pollutant levels and their sources which could be used in policy formulation for air pollution control. This is timely as the new Clean Air Act now in its final stages in the Philippine Congress and an Air Quality Action Plan is being launched by the Asian Development Bank to mitigate vehicular emission derived air pollution.

#### **d) Electronic Networking and Outreach**

The Philippines also participated at the Project Formulation Meeting of this Subproject held at MINT, Bangi, Kuala Lumpur, Malaysia on March 9-13, 1998. We are ready to start the development of our home page as soon as the standard format is received. We would also like to take this opportunity to offer the expertise of our National Project Coordinator of the Subproject in the conduct of training on Web Site Construction for Member States in need of such training.

#### **RAS/0/022 - "Public Acceptance and Trade in Irradiated Food"**

There were two Philippine participants at the Regional Workshop on Harmonized Procedures and Regulations on Irradiated Food which was held in Seoul, Korea on April 27 - 29, 1998. From such participation, we wish to particularly underscore the insights gained by the Philippine participant from the Bureau of Food and Drug. The Bureau, in Cooperation with the Philippine Nuclear Research Institute drafted an administrative order prescribing the regulations for food irradiation. These regulations are based on

international standards and patterned after the model harmonized regulation on food irradiation for Asia and the Pacific. It is planned that these regulations will be finalized in early 1999.

We understand that this project is due for closure this year.

#### **RAS/0/023 - "Energy, Electricity and Nuclear Power Planning"**

The Philippines is pleased to host the "Regional Training Course on Economic Analysis of Nuclear Electricity Generation Costs and Comparison with Other Energy Sources" on October 5-9, 1998. This was one of the activities proposed at the Project Formulation Meeting on Energy held on March 23-27, 1998 where the Philippines was a participating country.

We are appreciative of the acceptance of the two Philippine participants to the "RTC on Externalities Associated with Electricity Generation Concepts and Estimation" which will be held in Korea on September 28-October 2, 1998.

We also participated at the Project Formulation Meeting on the "Thematic Programme for Research Reactors in the Asia-Pacific Region" in Taejon, Korea on March 23-27, 1998.

#### **RAS/4/008 - "Maintenance of Nuclear Instruments"**

The National Project Coordinator attended the Consultants' Meeting on "Preparation of a Handbook on Care, Handling and Effective Protection of Nuclear Medicine Instruments" in Vienna on December 8-12, 1997.

The National Project Coordinator is assisting in the conduct of the quality assurance tests on a gamma camera provided by the IAEA for the model project "Nuclear Medical Techniques in Preventive Nephrology" of the National Kidney and Transplant Institute. Performance of the acceptance tests for the new equipment will be done. Subsequent reference tests will be conducted, as well as routine tests established in order to assure reproducibility in the performance of the gamma camera. The equipment provided by the Agency under this project are being utilized in the conduct of these tests. These are the power line analyzer, flood phantom, and SPECT phantom, among others.

We would appreciate information on the status of this project.

#### **RAS/6/028 - "Thematic Programme on Health Care"**

One of the Subproject National Coordinators attended the National Coordinators' meeting held in Mumbai, India in March 1998. The Philippines is grateful for the scintimammography table donated by the IAEA for the Subproject on Breast Cancer which will be used for a pilot study at the Philippine General Hospital.

The Subproject National Coordinator on in-vivo projects has agreed in principle to host a regional training course on myocardial perfusion scintigraphy on the first week of February 1999.

We nominated two participants to the Regional Workshop on Treatment of Thyroid Cancer with I-131 which will be held in Lahore, Pakistan on October 5 -9, 1998 and two participants to the Regional Workshop on Scintimammography Techniques which will be held in Lucknow, India on November 23-27, 1998.

We also hope to participate at the Regional Training Course on Nuclear Cardiology to be held at the Singapore General Hospital on November 30 - December 11, 1998.

#### **RAS/6/027 - "Quality Assurance (QA) in Radiation Therapy**

We appreciate the approval for funding of the research contract entitled "Establishment of a Quality Assurance Programme in Brachytherapy in the Philippines" which commenced in January 1998. Since this research study is the first of its kind in the country, it is expected that other national institutions with brachytherapy capabilities or those with plans to purchase such equipment will benefit from this project.

There were two Philippine Radiologic Technologists from two different Medical Centers who participated at the "Regional Quality Assurance Workshop for Radiation Therapy" held at the Singapore General Hospital on July 29 - August 5, 1998. The two participants are expected to play key roles in the establishment of departmental quality assurance programme in their respective hospitals and serve as resource persons for other institutions through their involvement in the different activities organized by the different radiologic technology schools and professional organizations.

We also appreciate the acceptance of the Philippine nominee to the "Regional Training Course on Intraluminal and Interstitial Brachytherapy" which will be held in Tata Memorial Hospital on November 23-27, 1998.

We would like to inquire into the status of the plan to invite the Philippines to host the "Regional Training Course on the Basis for Clinical Quality Assurance in Radiation Therapy" in 1999. The Project Counterpart has indicated her willingness to be the Course Director for the RTC and recommends the RTC to be held in July 1999.

#### **RAS/7/008 - "Radiation Sterilization of Tissue Grafts"**

We would like to take this opportunity to congratulate Singapore for launching the Open Distance Learning (ODL) Diploma Course for Tissue Bank Operators (Technicians) last year. We are happy to report that the Philippine participant who topped the examinations in the 1<sup>st</sup> Phase of the TC for Delivery of Curriculum to Tissue Bank Operators, will also participate at the 2<sup>nd</sup> Phase of the RTC.

The Philippine General Hospital and the Philippine Nuclear Research Institute were hosts

at a Regional Training Course on "Radiation Sterilization of Tissue Grafts" on August 17-21, 1998. There were 16 foreign participants from 10 Member countries and 4 local participants in attendance. At this point, we are pleased to cite the remarkable work of Dr. Julyn A. Aguilar of the Philippine Orthopedic Center, on the superior effect of radiation-sterilized amnion in healing and epithelization in clubfoot operation. She demonstrated this with the use of slides to the participants of the RTC.

The National Project Coordinator attended the Regional Workshop for Trainors on the Delivery of the Curriculum to Tissue Bank Operators on April 27 - May 8, 1998 in Singapore.

We have nominated three participants to the Workshop on Self-Assessment Review and Public Awareness in Tissue Bank which will be held at MINT, Malaysia on November 23-27, 1998.

#### **RAS/8/077 - "Advanced Techniques in Industry"**

It was unfortunate that we were not able to attend the First Meeting of National Project Coordinators for the above-mentioned project which was held in Takasaki, Japan on March 23-26, 1998. However, we indicated our support for the project with our participation in the radiation processing projects and others.

##### **a) Radiation Technology**

We are thankful for the approval of our research contract entitled "Natural Antioxidants for RVNRL". This project was initiated last July. Screening of possible antioxidants for RVNRL from natural sources was done.

The Chief Scientific Investigator of the project attended the Research Coordination Meeting on "Improvement of Physical Properties of RVNRL" which was held in Bangkok on September 7 - 11, 1998.

The Philippines is a recipient of a Research Contract entitled "Preparation of New Hydrogels from Carageenan via Radiation Copolymerization and Crosslinking". We will host the First Research Coordination Meeting on Radiation Processing of Indigenous Natural Polymers on November 9 - 13, 1998

##### **b) Non-Destructive Testing**

The Philippine Nuclear Research Institute continues to organize NDT courses for the industry in close coordination with the Philippine Society for NonDestructive Testing. Thirteen training courses on UT, ET, RT and SM were held from September 1997 to August 1998 with 119 participants from all over the country.

The PNRI continues to chair the National Certifying Board on NDT. We recently entered into a Memorandum of Agreement with the Technical Education and Skills Development Authority (TESDA) on the training of their trainers.

An innovation to this technical cooperation is the placement of successful trainees for on-the-job training in industry. All trainees who have undergone such OJT have been hired by the host industries.

#### **RAS/8/078 - "Nucleonic Control Systems and Tracers in Industry"**

The National Project Coordinator of this project has initiated preparations for a demonstration of the use and advantages of a gamma column scanning technique by an expert mission to a group of end users in February 1999. We are in the early stages of negotiating with the Petron Bataan Refinery for the venue which is located in Luzon but outside of Metro Manila.

The Philippines sent two participants to the Regional Workshop on Design, calibration and Quality Control of Nucleonic Gauges which was held in Hanoi, Vietnam on September 14 - 18, 1998.

#### **Thematic Programme on Agriculture**

The Philippines attended the Project Formulation Meeting on the "Thematic Programme on Agriculture" which was held in Beijing, China on March 2 -6, 1998. The Philippines submitted a proposal entitled "Use of Radiation to Create Useful Genetic Variation in Rice".

#### **RAS/9/018 - "Strengthening of Radiation Protection Infrastructures"**

In pursuit of the commitment of the Philippines to adopt the International Basic Safety Standards for Protection Against Ionizing Radiation and for the Safety of Radiation Sources (IBSS), a PNRI Task Force was created to identify and make the necessary recommendations on the provisions of the IBSS, to evaluate and assess the practicability of fully adopting the IBSS in the long term and to coordinate with our Nuclear Training Section in the development and conduct of training programs and related activities on the IBSS.

Under this thematic area, the Philippines is participating in the Radiation Protection Distance Learning Project. Twelve PNRI staff participated in the Phase 1 (institute-wide) "trailing" program of the project. Region-wide, a total of 21 individuals participated in Phase 1. We intend to proceed participating in Phases 2 and 3 of the project.

The Philippine Country Supervisor was invited to serve on the Agency's Advisory Group Meeting on Training in Radiation and Waste Safety which will take place in Vienna on September 28 - October 2, 1998.

The Philippines participated in the Training Course on Recent Developments in Basic Radiation Protection held in Tokai, Japan on November 10-21, 1997.

We would like to take this opportunity to reiterate the need to conduct a regional workshop on notification, authorization and control of radiation source. The workshop is expected to contribute to the establishment of national systems that foster assured control of sources, including safety assessment of practices and adequate inspection that would optimize the limited available resources in most countries in the region. It is, therefore, urged that priority be given to the conduct of the regional workshop which was originally scheduled middle of this year. Should this workshop not push through this year, we would like to indicate our willingness to host the workshop on the 3<sup>rd</sup> week of January 1999.

The Philippines was privileged to host the Workshop on Emergency Planning Accident Assessment and Response to Nuclear and Radiological Accidents on November 10-14, 1997 with 24 participants from 15 RCA member countries. Towards developing a national capability to respond to emergencies in any member country of the region, we would like to emphasize the continuing need to organize similar activities, especially for those countries who were not participants to the training activity held in China.

We are pleased to report that our National Radiological Emergency Preparedness and Response Plan (RADPLAN) was completed and approved by the National Disaster Coordinating Council.

At this point, we would like to bring to mind the need for establishing a regional notification network among national emergency planning and preparedness institutions from which to draw an immediate line of assistance in response to regional nuclear and radiological emergencies.

We are pleased to note the inclusion of the subject on Radiation Protection in Medicine as this responds to the felt need of addressing specifically the issues in medical applications. We will participate in the workshop on radiation protection in medical exposure for regulators and hospital staff, including patients, medical staff and the public which will be held this year.

The Philippines was one of the six countries that participated in the Expert Advisory Group Meeting on radiation protection to review and develop radiation protection guidance for naturally occurring radioactive materials in the oil and gas and other mineral extraction and processing industries (NORM and TENORM).

We support the recommendation that a new task be considered under RAS/9/018 to obtain information from all member states from the region on the extent of practices involving NORM. The organization of a workshop on regulatory control strategies applicable to mining and processing of NORM could be organized upon availability of the information.

The Philippines participated at the training course on Dosimetry held in Japan on September 29 -October 3, 1997 and at the Workshop on Radioactivity Measurements in Environmental Samples held in Melbourne, Australia on November 24-28, 1997. The Chief Scientific Investigator of the country's Research Contract on the Reference Asian Man attended the 2<sup>nd</sup> RCM for this Phase 2 of the CRP which was held in Taiyuan, China on June 15 - 19, 1998. We will participate in the Workshop on the Application of Indirect Methods for Individual Dosimetry of Internally Deposited Radionuclides and at the Workshop on Environmental Radiation Monitoring.

We will continue to participate in the computational intercomparison of internal dose assessment and the intercomparison on environmental radiation monitoring. We highly welcome such participation in intercomparison activities since these programs provide us dosimetry services access to calibration field and resources not available to us, with radiation energies covering the full range normally encountered in the workplace. We are, thus, given a better appreciation of the strengths and weaknesses of our monitoring programs, enabling us to identify ways to further improve our calibration, measurement and assessment methods.

The National Project Coordinator participated at the Expert Advisory Group Meeting on RAS/9/018 in Colombo, Sri Lanka on February 23-25, 1998. At this meeting, the Philippines strongly supported the recommendation that revised Terms of Reference for the Coordination Group and National Project Coordinators should form the basis for future interactions between the Agency and the Member States and for selecting membership in each group. We also supported the recommendation that there should be a confirmation from the persons selected as National Project Coordinator that they understand and accept the Terms of Reference.

We are pleased to inform that we agree, in principle, to host the Expert Advisory Group Meeting for the Project Review of RAS/9/018 on the third week of February 1999.

#### **RAS/0/025 - Technical Cooperation Among Developing Countries**

The Philippines participates in this project and strongly supports the initiatives of the project in the development of a Directory of Facilities and Services in RCA Countries. It is hoped that, with the establishment of this Directory, the expertise and facilities available in the region will be fully harnessed.

In conclusion, we are pleased to inform that at the invitation of the Philippine Government, the First ASEAN Experts' Working Meeting was held at the Philippine Nuclear Research Institute on August 26-28, 1998. Chaired by the Philippines, with 26 participants from six member countries, namely Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam, the Meeting developed and adopted a Framework for ASEAN Cooperation on Nuclear Safety and Nuclear Waste Management. We are certain that as this Cooperation matures, it will serve to enhance the activities of the RCA, emphasizing the complementarity of the existing cooperation, all of which seek to develop a nuclear safety culture that will allow the sustainability of nuclear applications.

## COUNTRY STATEMENT - SRI LANKA

27<sup>th</sup> General Conference Meeting of RCA Member States  
23<sup>rd</sup> September 1998  
IAEA, Vienna, Austria.

Mr. Chairman, distinguished representatives and other participants.

Mr. Chairman, please accept my congratulations on your selection to chair this meeting. On behalf of the Government of Sri Lanka I Thank your Government for hosting the 20<sup>th</sup> National Representatives Meeting of RCA member states, in your country, during the period 30 March - 03 April 1998 and also congratulate Dr. Carlito Aleta and through him the Agency for the continuing efforts made in steering RCA through the apparent period of transition at present.

### **Guidelines and Operating Rules for the RCA Programme:**

The culmination of the efforts of RCA to revise and improve its management structure has been the adoption of the Guidelines and Operating Rules for the RCA Programme. Sri Lanka hopes that balance work too could be completed in the near future and we congratulate the efforts and contributions made by Australia in this connection.

### **New joint UNDP/RCA/ IAEA Project:**

Under this project the PFMs were held for the three areas Viz. Air Pollution

Marine Coastal Environment  
Electronic Networking and Outreach.

Sri Lanka was represented at these meetings and wishes to thank the Governments of Phillipines and Malaysia for hosting the PFMs. It will be important to have adequate monitoring and developing quantifiable indicators to assess the success, from the start of each sub project.

Sri Lanka also participated in the PFM on " Access to clean drinking water" and was able to make a nominal financial contribution for the budget. It is noted with appreciation the contributions made by India and Australia for having agreed to host training courses relevant to the projects on clean drinking water and marine pollution respectively. The Government of Phillipines deserves our thanks for having hosted the PFMs.

Sri Lanka is keen on the developments that are to be followed from the project on " Electronic Networking and Outreach ". We welcome the contributions from Malaysia, India and China for this project.

Sri Lanka notes with appreciation the efforts of the representatives of the Governments of Australia, Japan and Phillipines for working out the proposals for the appointment of the project manager for the current UNDP/IAEA/RCA Project.

### **Thematic Programmes:**

Sri Lanka participated in the following thematic planning meetings  
:

China (02-06 March 1998) for Agriculture  
Japan (23-26 March 1998) for Industry and Environment

We thank the Governments of China and Japan for their contributions in developing the thematic plans. We also thank the Government of Korea for functioning as the lead country for the thematic programme in energy and research reactor and hosting the training courses under this thematic area.

Sri Lanka participated in the first NCM of the thematic project on health care held in India during 16-20 March 1998. Sri Lanka thanks the Government of Indonesia for functioning as the lead country in this project and to the Government of India for hosting the NCM and training.

### **Organization of Management Changes:**

It has to be noted that starting from 1998 the RCA will undergo changes in organization and management.

Concepts like regional ownership and management of RCA projects will be tested in the field. It will become crucial for RCA countries to demonstrate and produce positive results while attempting to make such concepts into practical realities through management changes.

### **Vision of RCA**

We congratulate Indonesia for having formulated the draft vision statement for RCA and hope that this work will be completed.

### **Conclusion:**

Finally on behalf of the Government of Sri Lanka I wish to thank the IAEA for holding this 27<sup>th</sup> General Conference Meeting and the RCA Preparatory Meeting and to all the RCA member states and the IAEA for their contributions to RCA programmes.

## LIST OF ACTIVE RCA PROJECTS 1997/1998 CYCLE

Project No	Funding	Title
RAS/0/021*	Hardcore	Nuclear Power Planning
RAS/0/022*	<i>Mixed</i> (JPN)	Public Acceptance and Trade in Irradiated Food
RAS/0/023*	Hardcore	Energy, Electricity, and Nuclear Power Planning
RAS/0/024	Hardcore	Project Formulation Meeting
RAS/0/025	Hardcore	Development of TCDC
RAS/4/016	<b>Footnote a/</b> (JPN,KOR)	Preparation for Disposal of Low and Intermediate Level Wastes(LILW)
RAS/6/018 <sup>+</sup>	Hardcore	Radioimmunoassay for Hepatitis B Diagnosis
RAS/6/027	Hardcore	Quality Assurance in Radiation Therapy
RAS/6/028	Hardcore	Thematic Programme on Health Care
RAS/6/029 <sup>++</sup>	<i>Mixed</i> (AUL)	Improved Training for Nuclear Medicine Technicians
RAS/7/008	Hardcore	Quality Assurance in Radiation Sterilization of Tissue Grafts
RAS/8/069 <sup>**</sup>	<b>Footnote a/</b> (AUL)	Isotope and Radiation in Industry and Environment
RAS/8/076	<i>Mixed</i> (CPR, PHI,MAL, THA, NZ)	Better Management of the Environment and Industrial Growth
RAS/8/077	<b>Footnote a/</b> (JPN)	Thematic Programme on Advanced Techniques in Industry
RAS/8/078	Hardcore	Nucleonic Control Systems and Tracers in Industry
RAS/8/080	(UNDP)	Better Management of the Environment and Industry through Isotope and Radiation Technology
RAS/9/006	<i>Mixed</i>	Strengthening of Radiation Protection Infrastructures
RAS/9/018 <sup>#</sup>	(AUL, JPN)	Radiation Protection Infrastructure (Phase III)

\* To be closed in 1998

\* Closed

\*\* Continuation of RAS/6/022

\*\* To be closed after equipment purchase in 1998.

# Continuation of RAS/9/006

## Projects for 1999-2000 (RCA)

Field	Funds	Title
Agriculture	H	<ul style="list-style-type: none"> <li>• Mutational Enhancement of Desired Genetic Diversity in Rice (RAS/5/037)</li> <li>• Irradiation as Sanitary and Phytosanitary Treatment of Food (RAS/5/034)*</li> <li>• Better Management of Feeding and Reproduction of Cattle (RAS/5/035)*</li> </ul>
	A	<ul style="list-style-type: none"> <li>• Monitoring Pesticide Residues in Food and the Environment (RAS/5/036)</li> <li>• Improving Genetic Diversity in Wheat, Oil Crops and Pulses (RAS/5/038)</li> </ul>
Health	H	<ul style="list-style-type: none"> <li>• Quality Assurance in Radiation Sterilization of Tissue Grafts (RAS/7/008)</li> <li>• Quality Assurance in Radiation Therapy (RAS/6/027)</li> <li>• Nuclear Medicine Applications (RAS/6/028)</li> </ul>
	A	<ul style="list-style-type: none"> <li>• Improved Training for Nuclear Medicine Technicians (RAS/6/029)</li> <li>• Distance Learning in Radiation Oncology (RAS/6/033)</li> </ul>
Industry	H	<ul style="list-style-type: none"> <li>• Radiotracers, Sealed Sources and Nucleonic Gauges in Industry (RAS/8/086)</li> </ul>
	A	<ul style="list-style-type: none"> <li>• Manufacture and QC of CO-60 Brachytherapy Sources (RAS/4/018)</li> <li>• Non-destructive Testing and Evaluation (RAS/8/085)</li> <li>• Radiation Processing Applications (RAS/8/087)</li> <li>• Thematic Programme on Advanced Techniques for Industry (RAS/8/077)</li> </ul>
Energy/ Research Reactors/ Waste Management	H	<ul style="list-style-type: none"> <li>• Comparative Assessment of Electricity Generation Options (RAS/0/028)</li> <li>• Improving Research Reactor Operation and Utilization (RAS/4/019)</li> </ul>
	A	<ul style="list-style-type: none"> <li>• Disposal of Radioactive Waste from Non-Power Sources (RAS/4/016)</li> </ul>
Environment	H	<ul style="list-style-type: none"> <li>• Better Management of Environment and Industrial Growth * (RAS/8/076)</li> <li>• Isotope Use in Managing and Protecting Drinking Water (RAS/8/084)</li> <li>• Isotopic and Related Techniques to Assess Air Pollution (RAS/8/082)</li> </ul>
	A	<ul style="list-style-type: none"> <li>• Management of Marine Coastal Environment and its Pollution (RAS/8/083)</li> <li>• Radiation Protection and Networking (RAS/0/029)</li> <li>• Better Management of the Environment and Industrial Growth (RAS/8/080)</li> </ul>
Radiation Protection	H	<ul style="list-style-type: none"> <li>• Harmonization of Radiation Protection * (RAS/9/018)</li> </ul>
	A	<ul style="list-style-type: none"> <li>• Environmental Radiation Monitoring and Regional Database (RAS/9/024)</li> </ul>
General	H	<ul style="list-style-type: none"> <li>• Development of TCDC in Asia &amp; Pacific (Phase II) (RAS/0/025)</li> </ul>
7 Fields		Hardcore: 14 (*: mixed funding)
		Footnote a/: 13

**WORKING PAPER FOR 1998 RCA GENERAL CONFERENCE MEETING**  
**ON GUIDELINES AND OPERATING RULES FOR THE RCA PROGRAMME**

At the RCA Meeting of Representatives held in Taupo, New Zealand in March/April 1998, there was discussion of the Guidelines and Operating Rules for the RCA Programme which were approved at the 1997 RCA General Conference Meeting. The Meeting agreed that a Task Group comprising the National Representatives from Australia and Philippines should be asked to examine and collate the responses offered on paragraphs 4.2 (f), (g), & (h), 5 (b), 6 (a) & (c). The Task Group has taken the opportunity to propose several related amendments to other paragraphs.

In this working paper, text proposed to be added is shown in bold type and text proposed to be deleted is shown in square brackets.

### **CHAIRING OF MEETINGS**

#### **Paragraph 2.4(d)**

The Chair for the Regular (March) Meeting has often been taken by a senior national figure who is unable to be present for the General Conference Meeting. The Task Group recommends a slight amendment to the text as shown that will allow more flexibility. We do not consider this change to have any negative affect of the integrity of the RCA management or operations.

*Both meetings of the National RCA Representatives are **usually** chaired by the National RCA Representative of the Member State hosting the Regular Meeting.*

#### **Paragraph 4.2 (g)**

The Task Group recommends that the text should be amended slightly as indicated below to allow flexibility as above.

*Project Committee Meetings shall **normally** be chaired by the Representative of the RCA Member State hosting the meeting.*

#### **Paragraph 5.2(g)**

The Task Group again recommends a similar slight amendment to this paragraph allowing more flexibility.

*Research Coordination Meetings are **normally** chaired by the Chief Scientific Investigator representing the RCA Member State hosting the meeting.*

## SECRETARIAT TO MEETINGS

In paragraph 4.2(h) and 5.2(h) of the Guidelines and Operating Rules, there is reference to the requirement for the Agency to perform the tasks of Secretary to meetings. This role is consistent with Article VII(1) of the RCA Agreement which states that “*the Agency shall perform secretariat duties under this Agreement*”. However, if the Agency chooses not to send a staff representative, as happened with the recent Project Formulation Meetings, there needs to be some formalising of who is responsible for the secretariat responsibilities.

### Paragraph 4.2(h)

The Task Group recommends that the text of paragraph 4.2(h) be modified as below to provide guidance for these events.

*The Representative of the Agency will perform the tasks of Secretary to these meetings. If no Agency representative will be present, the task of providing the Meeting Secretary will normally be assigned to the Host Government.*

### Paragraph 5.2(h)

The Task Group recommends that the text of sub-paragraph 5.2(h) be similarly modified as below to provide guidance for these events.

*The Representative of the Agency (Technical or Project Officer) shall perform the tasks of Scientific Secretary to all Research Coordination Meetings. If no Agency representative will be present, the task of providing the Meeting Secretary will normally be assigned to the Host Government.*

## PROJECT COMMITTEES

The Task Group considers that the second sentence of paragraph 4.2 (f) could be interpreted as placing a pedantic restriction on National RCA Project Coordinators as far as their input of information to Project Committee meetings, etc.

### Paragraph 4.2 (f)

The Task Group therefore recommends that the paragraph 4.2(f) be amended as below.

*A standard format should be used for reporting the results of Project Committee Meetings, Project Formulation Meetings, Project Review Meetings, and Project Evaluation Meetings. The National RCA Project Coordinators attending the Project Committee Meetings shall **make every effort to ensure that all relevant information relating to the projects is available at the time of the meeting and presented in the required format for the Meeting Report.***

*Incomplete*

## **COORDINATED RESEARCH PROJECTS (CRPS)**

The Task Group notes that in the past there have been CRPs that have not been linked to a corresponding RCA TC project and consequently there was no established National RCA Project Coordinator. Paragraph 5(b) refers to both the National Chief Scientific Investigator and the Chief Scientific Investigator, but their respective roles are not clear. The roles of the Chief Scientific Investigator are defined in paragraphs 5.2(e) and (g). The Task Group recommends that the reference to the National Chief Scientific Investigator be deleted as no advantage is seen in this additional tier of administration, particularly if the National RCA Project Coordinator is not involved in the specific research area concerned.

### **Paragraph 5(b)**

The Task Group recommends that paragraph 5(b) be amended as below.

*Each CRP is essentially a network of national research institutes possibly encompassing all Member States in the region, but in any case not less than five RCA Member States, mandated to conduct a research programme in a well-defined topic, each being represented by a Chief Scientific Investigator (CSI). [[For CRPs, the National Chief Scientific Investigator shall be the National RCA Project Coordinator.]] The Chief Scientific Investigator shall keep the relevant National RCA Project Coordinator informed on all matters related to the CRP.*

## **ROLES AND RESPONSIBILITIES OF THE AGENCY**

The Task Group suggests that in section 3.1 headed "Role and Responsibilities of the Agency", there should be reference to the Agency's role in the Project Committees and Research Coordination Meetings.

The Task Group recommends that the text should have two extra dot points added to paragraph 3.1(e) as below:

- *Provide an IAEA representative to be a member of the Project Committee established for each cooperative project in the RCA programme*
- *Perform the tasks of Secretary for the Project Committee and Research Coordination Meetings.*

## **FUNDING ARRANGEMENTS**

In relation to the funding arrangements for RCA activities, the Task Group was aware of the strong desire on the part of RCA Member States to achieve the most productive use of available project funds so that maximum benefits can be extended to all parties.

Another important factor is the commitment to the TCDC modality where the RCA already has a good record of achievement. The Task Group recommends that paragraph 6(a) should be used to re-emphasise the commitment of



RCA Member States to not only promoting, but also incorporating, a balanced TCDC contribution into the overall RCA Programme activities.

#### **Paragraph 6(a)**

The Task Group therefore recommends that paragraph 6(a) be amended as below.

*RCA Member States are expected to contribute **in-cash or in-kind** resources to the RCA Programme to the maximum extent feasible **and, wherever possible, make contributions to TCDC.** Their TCDC contribution may be *[[made in-cash or in-kind such as]]* **in the form of providing cost-free experts for RCA projects, making equipment available, bearing costs of subsistence of participants in events hosted by the country or any other form of contribution.** A country which hosts a training course is expected **to make its best efforts** to cover all local costs and provide the required logistical support.*

#### **Paragraph 6(c)**

National Project Coordinators are brought together for a variety of meetings such as Project Committees, Project Formulation Meetings, Project Review Meetings, Project Implementation Meetings, etc. In terms of participation in these meetings, the Task Group considers that the most important consideration should be the appropriate and efficient expenditure of project funds rather than any artificial economic parameter. Unlike the term “Least Developed Country”, there is no accepted definition of a “more advanced country”. The most important factor in the funding of these meetings is the need to achieve productive outcomes from all Member States that are actively participating in a particular project and contributing to the achievement of the project aims and objectives.

The Task Group also considers that the meaning of the last sentence in paragraph 6(c) is not clear and that Member States need to know the status of their contribution to the project budget. The Task Group considers that such costs can only be registered as in-kind contributions and that it would not be feasible for them to be recognised as in-cash, since in-cash contributions to project budgets must be lodged in an Agency account which is subject to Agency audit. The use of these funds is then subject to Agency administrative rules and regulations.

The Task Group recommends that the text of paragraph 6(c) be modified as below.

*The costs of attendance at *[[the]]* meetings of the National Project Coordinators shall normally be covered by project funds. Funds allocated to RCA projects from the Agency’s Technical Cooperation fund shall, however, not be used to cover the costs of attendance of National Project Coordinators from *[[more advanced countries in the region]]* **countries not actively participating in the project.** Costs covered by a Member State for the participation of its own representative at National Project Coordinators Meetings shall be shown as **in-kind** contributions of the Member State to the project budget **in the RCA Annual Report.***



## **OTHER MATTERS**

### **Paragraph 1.4**

The Task Group recommends that the first paragraph of paragraph 1.4 be slightly amended to be more into line with Article I of the RCA Agreement as below.

*The cooperation programme in the framework of the RCA Agreement is the **promotion and coordination of cooperative research, development and training projects in nuclear science and technology and may cover subjects in the fields of nuclear energy, nuclear safety, waste management, and isotope and radiation applications in agriculture, human health, industry, hydrology and terrestrial and marine environments.***

### **Paragraph 2.1(a)**

The Task Group recommends that the last word in paragraph 2.1(a) "objective" be made plural.

### **Task Group members**

John Rolland, National RCA Representative for Australia

Alumanda De La Rosa, National RCA Representative for the Philippines



**WORKING PAPER FOR 1998 RCA GENERAL CONFERENCE MEETING**  
**ON THE ESTABLISHMENT OF A PROJECT MANAGER POSITION FOR THE**  
**UNDP/RCA/IAEA PROJECT RAS/97/023**

**I. TERMS OF REFERENCE**

In response to the discussions on the agenda topic of "RCA Regional Management" at the 1998 Meeting of Representatives of RCA Member States in Taupo, New Zealand, the Meeting -

*noted its disposition to move towards the appointment of a Project Manager for the joint project on a two-year trial basis which will gain experience to assist in making a future decision on a Regional RCA Representative.*

*agreed that before a final decision is made on the appointment of a Project Manager for the joint project, a Task Force should examine the available funding options, the Manager's responsibilities including who he/she should report to, the legal status of the Manager, and the possibility of appointing the Manager on the basis of a secondment or cash-free basis.*

*agreed that the Task Force should consist of Mr Rolland (Australia), Dr Anand (India) and Dr Kobayashi (Japan).*

**II. ACTIONS**

The Task Force has considered the four points raised as its Terms of Reference and presents the following report for consideration by RCA Member States at their 1998 RCA General Conference Meeting.

**1. Responsibilities of the Project Manager**

The Task Force has prepared a list of duties, responsibilities and qualifications for a Project Manager for the new joint UNDP/IAEA/RCA project as in the Attachment to this report. The Attachment includes a Figure indicating in a flow diagram the envisaged organisation of the UNDP project.

The Task Force considers that the duties and responsibilities for the Project Manager as identified in the Attachment would be compatible with a P5 grading and, in our view, it would be unlikely that anyone with lesser abilities and qualifications could perform the tasks required and allow for a fair trial of the feasibility of the Regional Representative proposal.

**2. Funding Options**

The Task Force concluded that there were only limited practical sources for funding the Project Manager position as follows:

(i) Contributions by RCA Member States

- a) cash (untied);
- b) cash (tied);
- c) “cost free” expert.

As far as funding from Member States was concerned, the Task Force concluded that there was only one viable choice, option a). Options b) and c) were not considered feasible since support would seem contingent on the selection of a particular candidate.

The Task Force also recognised that in the present difficult economic circumstances throughout the RCA region, there was little realistic chance of such untied funding and so it was concluded that funding from RCA Member States was not presently an option.

(ii) IAEA Budget

- a) Regular Budget;
- b) TC Regional Project Budget.

The Task Force considered that the option of funds from the IAEA Regular Budget was not realistic as the position of RCA Coordinator was already being financially supported in this way.

The TC Regional Project Budget was considered as a possible source of funding. There is precedent for this mode of support, which was used from 1982 to 1996 to support the regional-based Project Manager/Chief Technical Officer positions established under the previous UNDP projects. Importantly, this funding is unobligated and would therefore enable the “best person” to be recruited to the position.

It is essential that there be sound and effective management arrangements put in place for the UNDP project. The importance of project management for the achievement of successful project implementation and quality outcomes and the suitability of using TC project funding for this purpose has been demonstrated by the IAEA, who have recruited project managers for various regional and inter-regional Model Projects.

The Task Force noted the rider in Section D of the UNDP approved Project Document, which states that “a CTO will be assigned only if required by the scale of programme coordination”. It also noted that the tasks required of the Project Manager for the UNDP project appeared to be exactly in line with those for the above similar positions in Model Projects, which TC is funding. The Task Force therefore considered that the import of the rider in the UNDP Project Document had been met.

The Task Force considers that the management of the UNDP/RCA/IAEA project would be enhanced through the establishment of a Project Manager position. The Task Force noted that the duties and responsibilities for the proposed Project Manager for the new UNDP/IAEA/RCA project were consistent with the current TC practice of providing project managers for regional and inter-regional projects and that the provision of funds from the TC Programme to support a project manager for the UNDP project would continue the long standing practice of such support for the new UNDP supported project.

(iii) UNDP Project Budget

Although it may have been possible to seek to have a Project Manager funded from the UNDP budget for the new UNDP/RCA/IAEA project, no such request for UNDP funds was included in the approved Project Document. The Document did contain a number of references to a Chief Technical Officer (CTO) but no budget was included against the position. Reallocation of UNDP funds for this CTO or Project Manager position at this stage would necessitate the loss of funds from project activities and Member States have expressed reservations at this option.

There is however one consideration relevant to the UNDP funding that might be used to seek funding from the TC budget for the Project Manager position. For a total yearly expenditure of UNDP funds below US\$8 million, it is understood that the UNDP provides an implementing agency with a reimbursement fee of 19% to cover support costs. Currently the total funding for all UNDP projects implemented by the IAEA is under US\$2 million. The total UNDP budgetary allocation of US\$1.05 million for the new joint UNDP/RCA/IAEA project should therefore provide some US\$199,500 in support costs between now and the December 2000 completion date. Further, over the past 14 years, a TC funded project with 13 man/months of effort has been allocated each year to provide for a regionally located Project Manager for the UNDP co-funded RCA projects. Based on present costings, such an allocation would be valued at around US\$195,000 pa.

**The Task Group considers that the Agency should be invited to consider funding for the Project Manager position from the TC Programme budget, while recognising that the receipts from the UNDP support costs would represent a significant off-set.**

**1. Legal Aspects of a Project Manager Position**

The proposed Project Manager position for the UNDP project would have the dual roles of providing support to that project and gaining operational experience prior to making a final decision on an RCA Regional Representative. A key function for the Project Manager, in addition to the project related work, would be to embark on the lengthy process of getting RCA projects known to other funding bodies with a view to having alternative project funding available from the start of the next 5 year cycle in 2002. This activity would be compatible with Article VIII (1) of the RCA Agreement viz:

*With the consent of the Meeting of Representatives, the Agency may invite any Member State other than the Participating Governments or appropriate international organisations to contribute financially or*

*otherwise to, or participate in, a cooperative project. The Agency shall inform the Participating Governments of such contributions or participation.*

and Article X of the Agreement:

*Any Government Party to this Agreement and the Agency may, where appropriate and in consultation with each other, make cooperative arrangements with appropriate international organisations for the promotion and development of cooperative projects in the areas covered by this Agreement.*

**The Task Force concludes that there is no legal impediment to the establishment of a Project Manager with duties as at the Attachment. These duties are similar to those for the previous UNDP Project Manager/CTO positions subject to an additional requirement to seek additional extrabudgetary funding for the RCA Programme.**

## **2. Additional Legal Considerations Relevant to an RCA Regional Representative**

The Task Force took note of the comments made by the IAEA Legal Division on the issue of an RCA Regional Representative, which are different to those for a Project Manager position for the UNDP project.

It was considered that the option of using IAEA/TC funds may only be possible for the Project Manager position and not a Regional Representative. From the IAEA's legal position, it was noted that an RCA Representative may not be permitted to be funded as a Staff Member, particularly if the responsibilities are seen to be in contradiction of Article VII of the Agency Statute which states that staff in the performance of their duties shall not seek or receive instructions from any source external to the Agency and should regulate their conduct with the interest of the IAEA only in view.

In relation to the funding of a future RCA Regional Representative, the Task Force considered that the establishment of the position should not impact on RCA programme activities. One means to achieve this would be to seek the necessary funds from international organisations other than the IAEA. Such organisations frequently provide fees for programme administration and it could be a realistic option to link the support of the RCA Regional Representative to this source of funding. From a practical point of view, tying the performance of the Regional Representative to the funding of the position would ensure that only applicants with sound credentials would be considered for the position.

The Task Force considers that on the basis that RCA Member States agree to establishing an RCA Regional Representative position for the future, the necessary long term funding for the position might be sought through an overheads component in the new extrabudgetary funds. Experience in this funding source is a component of the duties of the proposed Project Manager position for the UNDP Project.

## **5. Other Recommendations on RCA Regional Management**

The Task Force noted that the RCA Meeting of Representatives held in March/April each year has a very full agenda which can only be dealt with and the required decisions agreed if Representatives are focussed in their interventions and the Chairman takes an active role in ensuring the effective conduct of the meeting. This necessitates the Chair having a clear understanding and brief on all the issues before the Meeting.

The Task Force recommends that project funds be used to support a visit to IAEA Headquarters by both the designated Chair for the Meeting of Representatives in a particular year and the Chair for the previous year or an appropriate alternate from that country. The objective would be to meet with the RCA Coordinator in Vienna at least two weeks before the Meeting to thoroughly discuss and review the Meeting Agenda and the items to be discussed so that all agenda items can be given appropriate consideration and the business concluded within the time frame. The visit should also involve discussions with the RCA Programme's TOs and POs.

### III. CONCLUSIONS AND RECOMMENDATIONS

The Task Force concludes that:

- there is no legal impediment to the position of Project Manager for the UNDP/RCA/IAEA project
- the appointment of a Project Manager for the UNDP/RCA/IAEA project would be consistent with current TC practice as well as continuing the long standing support for the UNDP funded RCA projects.
- efforts to broaden the funding base be a component of the duties of the proposed Project Manager position for the UNDP Project.

The Task Force therefore recommends that:

- the IAEA be invited to make provision in its 1999-2000 TC Programme cycle for an RCA project to support the management of the UNDP/RCA/IAEA project through the provision of a full-time Project Manager with duties, responsibilities and qualifications as at the Attachment to this report, recognising that the receipts from the UNDP support costs would represent a significant off-set.
- RCA Member States agree in principle to establish an RCA Regional Representative position for the future on the basis that the necessary long term funding for the position be sought through means not affecting current activities, such as an overheads component in new extrabudgetary funds.
- RCA funds be used to support a visit to IAEA Headquarters by both the designated Chair for the Meeting of Representatives in a particular year and the Chair for the previous year, or an appropriate alternate from that country, in advance of the meeting to ensure effective briefing.

*Members of Task Force*

J M Rolland, Australia

A K Anand, India

S Kobayashi, Japan

**ATTACHMENT****Project Manager for UNDP/RCA/IAEA Project***Particular Duties and Responsibilities*

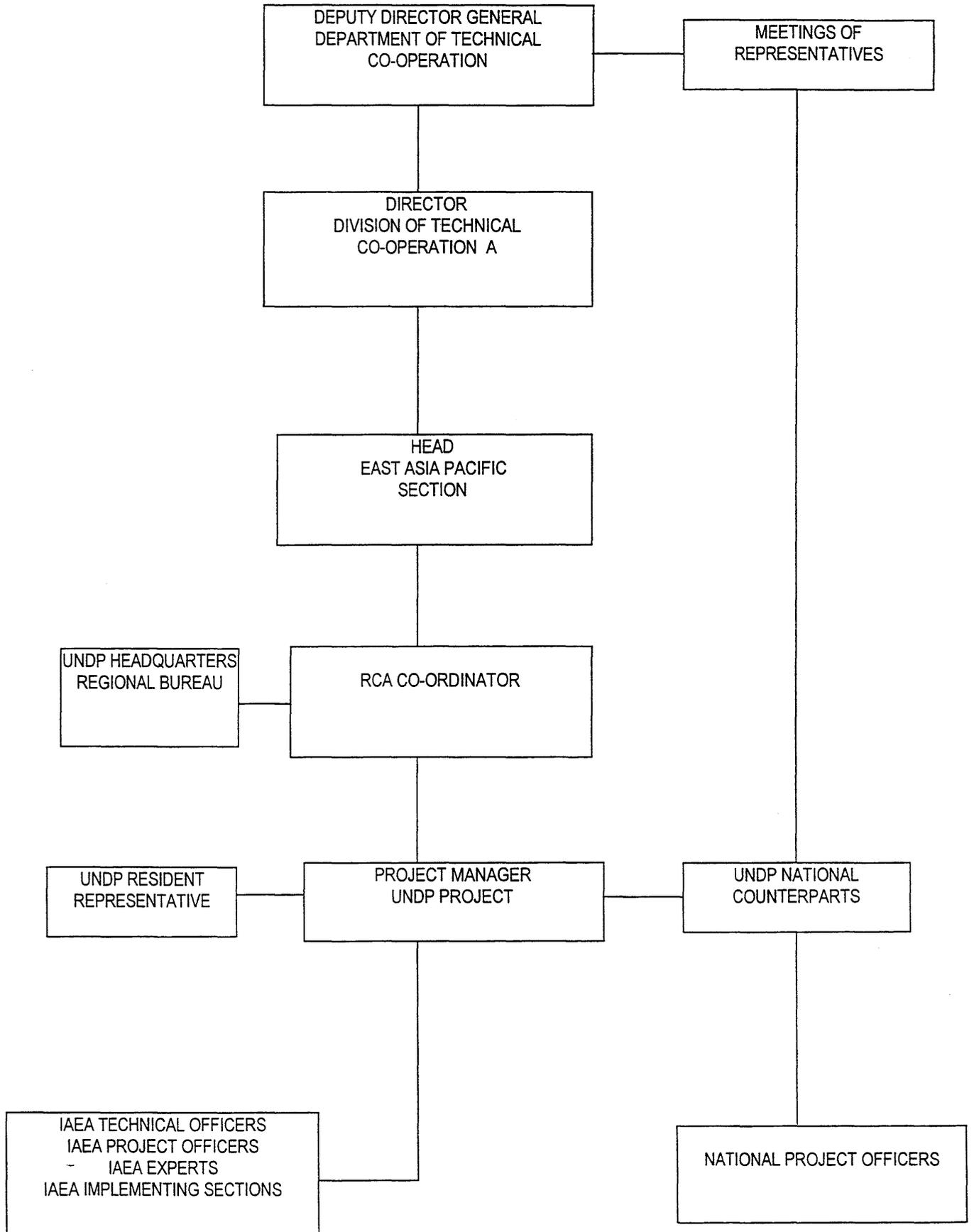
- ◇ To initiate, manage, integrate, facilitate, implement and monitor the multi-disciplinary activities of the joint UNDP project in participating RCA Member States;
- ◇ To identify the requirements, capabilities and needs of the RCA Member States and to establish appropriate modalities for regional and national assistance;
- ◇ To make decisions, in close consultation with the RCA Coordinator and the relevant IAEA technical and administrative divisions/sections, on action plans agreed at Project Formulation Meetings, scheduling and recruitment of experts, organisation of group training, training and sub-contracting activities of the project;
- ◇ To liaise with the IAEA Divisions concerned and participating RCA Member States on matters pertaining to the project;
- ◇ To report on the implementation of the project to the RCA Meetings of Representatives;
- ◇ To liaise with the UNDP, other international organisations and participating RCA Member States on matters pertaining to current and future funding of projects, and to actively seek alternative future funding sources.

*Qualifications*

Essential: PhD, or equivalent advanced degree in a physical science, environmental science or engineering and at least 15 years experience in developing, planning, coordinating, implementing and evaluating practical technologies, especially those utilising nuclear science. Excellent communication skills. Experience in project management and a record of success in securing competitive funding for projects.

*Desirable:* Knowledge of the RCA programme and the needs and capabilities of the RCA Member States. Demonstrated ability to work within the international community and in developing countries. Familiarity with IAEA technology transfer activities, policies and practices.

# ORGANISATION OF UNDP PROJECT





## ROLE OF LEAD COUNTRIES<sup>1</sup>

### Background

The designation of lead countries was first agreed at the RCA General Conference in October 1, 1997 and extended further at the Meeting of RCA National Representatives on 30 March-3 April 1998 held in Taupo, New Zealand<sup>2</sup>.

Although the concept of "lead country" has not yet been included in the RCA Operating Rules and Guidelines it seems to be accepted by RCA MS .

The ensuing paragraphs are intended to confirm/clarify the role of the lead countries as already agreed in previous meetings and to further delineate and agree to any additional roles during the project implementation stage.

The presentation is done in a question and answer form for easy understanding of the situation.

#### 1. What was discussed during the 26<sup>th</sup> RCA GC( 1 October 1997)?

Lead Countries will develop proposals on the five(5) thematic areas agreed upon: Radiation Protection, Agriculture, Energy and Research Reactor, Health Care, Industry and Environment.

Action: PFMs<sup>3</sup> were held in Agriculture, Energy and Research Reactor and Industry by lead countries(China, Korea and Japan, respectively). No PFMs were held in 1998 for Radiation Protection and Health since the project activities had been formulated the previous year and confirmed in early 1998. <sup>4</sup>

#### 2. What was discussed during the RCA Meeting of Representatives in Taupo, New Zealand(30 March-3 April 1998):

Lead countries were designated for other ongoing projects and were tasked to develop proposals for those projects proposed to be extended for the 1999-2000 programming cycle.

In the case of the joint UNDP/RCA/IAEA project, lead countries were identified for each of the five(5) sub-projects. Earlier, only 4 sub-projects had held PFMs to develop the project and lead countries were requested to refine the project proposals formulated earlier.<sup>5</sup>

A complete list of lead countries for each of the ongoing projects, as well as their role, is shown as Annex 1.

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<sup>1</sup> Prepared as of 27 August 1998.

<sup>2</sup> Annex 1 provides detailed list of the designated lead countries and the roles they have played or will play after the Taupo Meeting. In March-April 1998.

<sup>3</sup> The PFMs were held in March 1998.

<sup>4</sup> For Radiation Protection the thematic meeting was held in Korea on 24-28 February 1997 and the work plans confirmed during an EAGM in Sri Lanka on 23-27 February 1998; for Health Care was held in Indonesia on 1-5 September 1997 and work plans prepared on 16-20 March 1998.

<sup>5</sup> The PFMs were on the sub-projects "Access to Clean Drinking Water", "Management of Marine Coastal Environment and Its Pollution", "Air Pollution and Its Trends", "Electronic Networking and Outreach". Still to be organized is the PFM on "Clean and Energy Efficient Production Processes."

Lead countries were requested to submit to the Agency the proposals by end of May 1998.

Action: Lead countries were able to submit proposals to Agency. These proposals were referred to Agency technical personnel for comments whose views were transmitted to lead countries for their consideration; this eventually lead to further revisions of the proposals by lead countries and/or the Agency.

3. What was done during the Meeting with Lead Countries for the joint UNDP/RCA/IAEA project, IAEA Headquarters, (27-31 July 1998)

Project committee meetings were proposed to be held in July 1998 to initiate the implementation of the joint UNDP/RCA/IAEA project; however, these were cancelled and instead a meeting of lead countries was held on 27-31 July 1998.

Lead countries, together with Agency officers, prepared the detailed implementation plan for each of the four sub-projects: Access to Clean Drinking Water, Management of Marine Coastal Environment and Its Pollution, Air Pollution and Its Trends, and Electronic Networking and Outreach.

The lead country representatives did the following activities:

- a. Prior to the meeting, consulted/contacted other country representatives to get their national input to the sub-projects, including exchanges of communications and circulation of revised proposals as necessary.
- b. At the meeting, presented the status of the project proposals; met with the respective Technical Officers and Division personnel (Section Head of East Asia and Pacific and RCA Co-ordinators and a consultant) ;discussed and provided details on the project activities in the workplan; contacted other national counterparts electronically to obtain clarification, input or feedback on certain items of discussion; and presented their group outputs to the Meeting proper.

Action: The detailed implementation plans per sub-project were forwarded to all National RCA Co-ordinators for their information and comments. These plans are incorporated in an overall plan which is being used by the RCA Office as guide in the implementation of activities.

4. What Lead Countries will do during the implementation stage

The role of the lead countries needs to be clarified during the project implementation stage since not all Member States may have the same concept of what this will entail. Some proposals are suggested below:

### Proposals:

-a) The lead country should be able to chair or co-chair with the host country, the project committee meetings(PCMs). The PCMs review the progress of project implementation and prepare the necessary recommendations/actions to address the concerns, if any.

Action: Needed agreement by MS.

-b) the lead country should be able to continue the co-ordination work with project counterparts on the technical aspects of the project

Action: Majority of Lead Countries under the joint UNDP/RCA/IAEA project already doing this. Needs further support and co-operation of Member States

-c) Liaise with Agency officials on technical/administrative aspects of the project, specifically, with the IAEA Technical Officers on the technical aspects, and with the RCA Co-ordinator on the administrative aspects of the projects. ( It must be noted that for regional events--training courses, workshops or meetings-- or even expert missions, there are designated course directors or contact persons who would interface directly with the experts and training section of the Agency. )

Action: Some Lead Countries under the joint UNDP/RCA/IAEA project are already doing this. Needs further support and co-operation of MS.

d) In consultation with other project counterparts, propose new activities related to the assigned thematic programme area, or to the ongoing project in which the proposed activities were not originally included, but were found necessary to be undertaken, and providing justifications thereto.

Action: Needs agreement by MS.

### 5. What Lead Countries will do during the Programming Stage:

Initiate undertakings to prepare proposals for the next programming cycle.

Action: Needs agreement by MS.

### 6. Who can be designated lead countries?

Member States chose among themselves the lead countries. In the case of the RCA the previous designation of a lead country seemed to be based on certain recognized factors such as that country's known expertise , historical and/or present involvement in, and funding support to, a particular area.

7. Is there a duration for the designation of lead countries?

The MS have to decide on this.

8. What are some of the concerns of designated lead countries?

Being a lead country requires commitment from the designated MS. These are some of the concerns:

- a) Not set up to do day-to-day activities for the project
- b) Being a lead country (representative) is not a full time job.
- c) Following up other MSs is role of secretariat.
- d) Others (which may be brought up)

Action. MS need to clearly address these concerns

**Conclusions/Recommendations:**

There is yet no clear role described in the RCA Operating Rules and Guidelines for lead countries. The MS should consider this aspect when revising the procedures.

MS needs to agree to the role of the Lead Countries during the programming and implementation stage. The MS should identify and clarify the role as soon as possible.

## PRELIMINARY DEVELOPMENT OF LEAD COUNTRY CONCEPT

**The Role of Lead Countries:** In conformity with the RCA Guidelines and Operating Rules and in cooperation with Member States, to facilitate and take overall responsibility for the role of participating Member States in the programming, implementation and evaluation of an RCA Project or Thematic Programme.

**Who May be a Lead Country:** Any participating Member State of the Project Committee, provided only that:-

- ⇒ the criteria set out below are met;
- ⇒ its status is endorsed by the Project Committee (subject to review by a Meeting of National Representatives );
- ⇒ it signifies its agreement in writing to accept the role of Lead Country to the RCA Coordinator.

**Reporting Responsibilities** The Lead Country acts only with the authority, and reports to the Project Committee. In the event of problems within a project, the Lead Country will raise these issues with the Member State concerned or the Agency as appropriate

**Criteria for Selection of a Lead Country:** A Lead Country must meet the following minimum criteria:

- ⇒ demonstrated expertise in several significant technical aspects of the Project or Thematic Programme, or a major National Development Programme related to the Project or Thematic Programme;
- ⇒ nomination of a person suitably qualified to be responsible for carrying out the duties assigned to a Lead Country;
- ⇒ guaranteed support from its own resources for the nominated person to carry out the normal duties of a Lead Country;
- ⇒ an ability to communicate rapidly with National Project Coordinators and the RCA Coordinator.

**Who Selects the Lead Country:** The Project Committee acting by consensus and with regard to any advice offered by National RCA Representatives and the Agency.

**When is a Lead Country Selected:** A Lead Country is selected at the time a Project Committee is formed. This implies selection only after initial development of the project as per Section 4.1 of the Guidelines and Operating Rules has been completed. Initial development involves preparation of a concept project proposal by one or more Member States. If this proposal is agreed to by the Regular Meeting of National RCA Representatives, then a Project Committee is established after at least three Member States signify their intention to participate.

**How Long is the Term of a Lead Country:** Normally the term is the agreed life of the Project or Thematic Programme and/or the period for which funding has been guaranteed. However, for Thematic Programmes that may be expected to be on-going, it may be

appropriate for the Project Committee to review the status of Lead Country each two years. Should a Lead Country wish to relinquish its responsibilities, at least 6 months notice would be expected.

## **Responsibilities of a Lead Country:**

**Programming:** Prior to a Project Formulation Meeting:-

(1) to consult with other participating Member States and to draft a list of:-

- ⇒ possible problems and objectives to be the basis of the Project;
- ⇒ the available expertise;
- ⇒ likely end users;
- ⇒ likely inputs in cash or in-kind;
- ⇒ possible outside sources of funding.

(2) to consult with the RCA Office for the Agency to:-

- ⇒ assign a Technical Adviser and seek his/her input;
- ⇒ seek approval to host a PFM in either the Lead Country or another suitable venue;
- ⇒ solicit nomination of participants, including representatives of end users where feasible and the technical adviser.

At the PFM, to ensure that participants:-

- ⇒ identify regional problem(s) to be solved;
- ⇒ determine the overall plan (objectives) to solve each aspect of the problem;
- ⇒ select the appropriate technical solutions to achieve the objectives;
- ⇒ define the resources available from each participating country;
- ⇒ determine the training needs;
- ⇒ establish a detailed workplan of activities and outputs, including schedules and budgets;
- ⇒ assign responsibilities for each activity;
- ⇒ in consultation with the Host Country, prepare a brief Meeting Report;
- ⇒ identify committed and potential funding sources.

Following the PFM, to :-

- ⇒ finalise a proposal, including a detailed prospectus for training events;
- ⇒ confirm the agreement of participating countries to carry out agreed roles;
- ⇒ submit the proposal to the RCA Office by TC deadlines.
- ⇒ in consultation with the Project Committee and funding agencies, refine the proposal for final approval

**Implementation:** To monitor the activities implemented by the RCA Office, and, in particular, to technical progress of the project in consultation with the Technical Adviser.

**Evaluation:** In conjunction with the Host Country, to arrange a formal review by the Project Committee of the progress of the Project at agreed intervals (normally annually); and, similarly, to facilitate a final evaluation and Report from the Project Committee at the end of the Project.

### **Issues for Resolution (partial list only)**

- relationship between RCA Coordinator and Lead Country;
- relationship between Lead Country and RRUs;
- potential conflict of interest between Lead Country and assignment of RRUs and sub-contracts for project/activity management;
- independent evaluation of suggested Lead Country and nominated responsible person against criteria;
- performance evaluation of Lead Countries;
- training in being a Lead Country for Member States especially, but not restricted to, LDCs;
- possibility of assisting countries or multiple Lead Countries



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# **RCA-VISION: PROPOSED MILESTONES**

Presented at the Meeting of RCA National Representatives during the IAEA General Conference, Vienna, 21-25 September 1998

## **1. INTRODUCTION**

At the Meeting of the RCA National Representatives held in Taupo, New Zealand 30<sup>th</sup> March - 2<sup>nd</sup> April 1998 Indonesia was requested to submit a paper which should provide guidance on how to transform the vision as described in the document the "RCA-Vision for the Next 25 Years" prepared earlier by Indonesia and subsequently discussed and adopted by the Member States as the basic document containing the RCA goals to be reached in the years to come.

This paper essentially shows a path to reach the aim and describes the major milestones along the way. At this very early stage, however, this paper should be regarded as a trigger to provoke deep and serious thinking and discussion among the strategic thinkers of the Member States on "*how to steer the RCA ship and what course to chart out in a common effort to reach the desired island of common bliss in the vast and turbulent Asia-Pacific ocean*".

## **2. BASIC CONSIDERATIONS**

The development of a common strategy to realize the RCA vision should take among others the following basic considerations:

- The spectrum of economic as well as science and technology development in the RCA Member States is still quite wide, ranging from less developing to highly advanced; as in the past, future RCA activities should therefore take into account the wide ranging needs of the Member States.
- The Asia-Pacific region constitutes a large part of the world, seen from the point of view of physical size, population and richness of natural resources; RCA activities should be geared towards achieving wider application and improvement of nuclear science and technology as a tool in solving the increasingly complex technological problems in the region.
- Awareness and appreciation of the benefits and risks of nuclear science and technology among the peoples of the Asia-Pacific region still need considerable improvement; successful further development and utilization of nuclear science and technology depend very much upon the degree of awareness, appreciation, acceptance, support and promotion of this branch

of science and technology by the Asia-Pacific society, in particular the government of the Member States; activities of the RCA should also include those to achieve a stronger support for the development and utilization of nuclear science and technology in the RCA Member States.

### **3. PROPOSED MILESTONES**

#### **1. Adoption of the document “RCA Vision for the Next 25 Years”**

The adoption of the above mentioned document as the official RCA vision for the next 25 years constitutes the first and fundamental milestone. This document gives not only a description and justification of the desired status and role of nuclear science and technology in the Asia-Pacific region in the next 25 years, but also a concept on how to reach the common goals.

For the strategic planning of the RCA activities, it is particularly important to have a consensus that the future scope RCA activities should be divided into thematic program areas, each of which being further subdivided into interrelated and mutually supporting topics.

The selection, fixing and development of thematic program areas for the next few years of RCA activities is therefore considered quite urgent.

#### **2. Documentation of RCA-related Country Profile of all RCA Member States**

To achieve maximum benefits of the RCA programs for the region and for the individual countries, the planning and design of RCA programs should take as far as possible into account the information on the nuclear science and technology profile of each member country.

The country profile should include among others information on:

- Policy and strategy of the individual government of the Member States towards the development and application of nuclear science and technology in the national development.
- Past, present and projected programs on the development and application of nuclear science and technology in various sectors of national development, highlighting in particular the output, outcomes and impacts, which have been or are expected to be achieved.
- Existing and projected scientific-technical, legal and educational institutions and infrastructure for the development, application and regulation of nuclear science and technology in the country;

- Existing and projected human and financial resources on nuclear science and technology in the individual country.

The information should be provided by the individual Member States, and should be presented preferably in standard a format.

### **3. Reorganization of all RCA projects into Thematic Programs**

A consensus among the Member States on the number and subject of the thematic program areas is considered urgent. The strategy to develop and sustain only a limited number of thematic areas is necessary in order to achieve higher impacts and to use the available limited funds more effectively. A consensus should also be reached on the RCA programs presently not falling under the existing thematic areas, and thoughts should also be given on the regional IAEA but non-RCA programs.

### **4. Documentation of all potential scientific working units in the RCA Member States to be recommended as Regional Resource Units**

The concept of Regional Resource Unit (RRU) and the vision of the RCA being supported by a wide spectrum of RRU's scattered in various Member States of the Asia-Pacific region are quite attractive. However, care should be exercised and a consensus should be reached especially on the following points:

- Selection criteria for an RRU;
- Role to be played by RRU's in planning, designing, implementing, monitoring and evaluating RCA programs and activities in their respective areas of competence;
- The scope of services to be provided by the RRU's and the benefits that they should enjoy for provided such services;

The above points should be treated very carefully, so as to achieve synergy, and not unnecessary rivalry and destructive competition.

To arrive at an objective decision on the selection of various RRU's, information should be made available and documented in the expertise areas in question, in particular on the available:

- Scientific-technical and supporting facilities
- Expertise, in particular type and number experts, based on their international reputation (publications, assignments, etc.)
- Current and projected scientific-technical programs

- Highlights of past performance and /or honours/awards which demonstrate objectively that the working unit should qualify as an RRU.

## **5. Documentation of all TCDC networks and activities within the RCA**

TCDC should constitute an important component in the RCA activities, as it does not only provide a forum for identifying, prioritizing, analysing and solving common problems in the developing countries, but it can also act as an effective means to promote nuclear capacity building in the participating member states.

An appropriate strategy and development of programs to enhance TCDC would be improved if information on the on-going TCDC networks and activities within the RCA is documented, and made available to the Member States. Information in question should include among others:

- List of current and planned scientific links and co-operations that each developing country within the RCA with another, including their scope and programs activities (joint research, personnel exchange, information exchange, scientific meeting/seminars/workshops, joint education and training, etc,...) as well as the respective output, outcome and impacts which have been achieved.
- Support provided by the respective participating countries (financial, in-kind contributions, etc.).

## **6. Establishment of standard RCA scheme of project design, proposal preparation and project implementation, monitoring, reporting and evaluation**

Ownership is an important keyword in the RCA program, and the IAEA is a partner, which provides expert and secretarial services and financial assistance for the success of the RCA programs.

In view of the above, RCA project planning and design, proposal preparation, project implementation, monitoring, reporting and evaluation should fall primarily under the responsibility of the RCA Member States. However, the support and or expertise, constraints and the prevailing rules and regulations of the IAEA in so as they are relevant to the RCA programs should be carefully taken into account.

To achieve higher efficiency and effectiveness, RCA Rules and Regulations, in particular the use of standard schemes and procedures including wherever possible standard formats should be established.

## **7. Establishment of RCA Regional Management Unit**

The establishment of the RCA Regional Management Unit is considered as a sign of growing maturity of the RCA. Discussions among the RCA Member States and with the IAEA are presently in progress. A proposal towards this objective has been prepared by Australia, and is subject to further elaboration and discussion, in an effort to find the best solution for all the parties concerned.

Based on a consensus, a time frame should set for the establishment of such a Regional Management Unit.

## **4. CONCLUDING REMARKS**

This paper describes an attempt to chart out a course of actions by identifying major milestones to be reached on the way to realize the RCA vision. The paper should thus be regarded as a trigger to stimulate thoughts among the representatives of the RCA Member States to find the best strategy and programs, which would give maximum benefits to the region and to the individual Member States.

**Annex:** See next page!

Annex:

## PROPOSED MILESTONES

<b>Activity</b>	<b>Time schedule</b>	<b>Remarks</b>
1. Adoption of the Document "RCA Vision"	September 1998	
2. Documentation of RCA-related Country Profile of all RCA Member States	June 1999?	
3. Reorganization of all RCA projects into Thematic Programs	End of 1999?	
4. Documentation of all potential scientific working units in the RCA Member States to be recommended as Regional Resource Units	1999?	
5. Documentation of all TCDC networks and activities within the RCA	End of 1998?	
6. Establishment of standard RCA scheme of project design, proposal preparation, implementation, monitoring, reporting and evaluation	End of 1999?	
7. Establishment of RCA Regional Management Unit	2000?	

A. Djaloeis, RCA National Coordinator, INDONESIA

<AD-Sep.'98>

## HOW TO CALCULATE IN-KIND CONTRIBUTIONS

### SOME SUGGESTIONS

#### Background

Under the RCA Agreement Member States show their commitment to the RCA Programme through various modalities such as providing cash contributions and in-kind contributions.

The accounting of cash contributions is straightforward. The IAEA, which is a depository of contributions from Member States, records in its financial books the amount received from each Member State. If the amount received is not in US dollars the agency converts the contribution to dollars using the current exchange rate at the time the contribution was received by the Agency.<sup>1</sup>

It is much more difficult to record the in-kind contribution from Member States. The IAEA accounting system only recognizes as in-kind contributions the following:

**Amount spent by a Member State to support travel and DSA of outside experts and foreign participants to a regional/national event the said Member State is hosting.**

On the other hand the following are not included in the agency's definition of in-kind contribution

1) **The equivalent cost of using local facilities, local travel arrangements, use of local manpower (including lecturers), if used in a regional/national event, and other expenditures of the host country.**

2) **The expenses incurred by a national who participates in a regional event if paid by his own country.**

3) **The fund kept in a country earmarked to support regional/national activities of the regional agreement if the recipient are its own nationals.**

Member States however, consider the above three items as in-kind contribution to the RCA Programme and prefer that these be properly recorded. Presently, there seems to be no hard- and- fast rule to calculate the in-kind contribution. This paper is an attempt to provide suggestions to Member States in estimating this contribution.

#### **Significance of Recording In-kind Contribution**

The level of commitment of a country can also be reflected in the amount of in-kind contribution it is providing to the regional agreement.

A country may not be able to give cash contributions to the RCA Programme but could fully support the hosting of regional events, including payments of air travel and local costs of foreign participants, use of local facilities, manpower and other resources.

A country may give both cash and in-kind contributions

The accounting of in-kind contribution is a much more difficult activity than recording actual cash contributions made. However, there is a need to reflect the in-kind contribution especially from countries which cannot afford to give actual cash contribution to the RCA programme, but willing to share and contribute its resources to the holding of RCA events. Hence it is important to account for this type of contribution.

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<sup>1</sup> Info given by Mr. P. Fouchard, 20 March 1998 to the undersigned.

## Suggestions to Calculate In-Kind Contribution

*Scope:* this will apply to training events, workshops, seminars, meetings, or other similar modalities within the region. (Similar calculations may be devised for experts missions).

*Applications:* There are three stages: the Preparation Stage (for the event), the Implementation Stage and the Post-implementation stage.

**Preparation Stage:** This stage begins when the event is known to be hosted locally (there is already government agreement or host institute agreement) until the arrival of the participants.

This stage comprises the following activities:

- in-house planning sessions of local counterparts
  - mobilizing local resources, e.g. local transport crew
- liaison work with other local organizations
  - with Dept. of Foreign affairs for visa applications
  - with airport authorities for airport arrangements
  - with local lecturers (if training course)
  - with local experts (if workshops)
  - with local speakers (if seminars)
- communications activities (long distance phones, faxes, etc.)
  - with IAEA official
  - with other local cooperators
- follow-up work
  - with other involved local organizations
- arrangements for accommodations, venue of event and local transportation (if including field visits)
  - survey of accommodations, and preparing for contract
  - survey for local transport services (if no in-house transport services available or inadequate)
  - survey for rental of equipment, and other meeting paraphernalia.
  - arrangements for hosting of social functions (by the local hosts and by the agency, if required)
- advanced deposit (if required) for hotel or contracted transport services
- arrival of participants and escorting to accommodations.
  - meeting at airport and transport to local accommodations

**Implementation Stage.** This stage begins on the first day of the event and ends on the end of the last programmed activity on the last day of the event.

The Implementation Stage generally consists of the following activities :

- provision of secretariat services
- assistance during the conduct of the opening ceremonies during the event
- shouldering the expenses for use of local facilities (rental of audio visual equipment (if not included in the use of venue), computers, rent of meeting rooms, etc.)
- hosting of a social event by the host institute
- communications expenses (phone calls, faxes, email, telegramme, etc.)

- escorting participants to field trips/visits
- arranging for return travel of participants
  - confirmation of bookings
  - local transport to airport arrangement
  - local airport courtesy arrangements

**The Post Event Stage** begins from the time the event proper ends and ends when the report of the event is prepared and sent to the concerned authorities.

This stage comprises the following activities:

- picking up from accommodations and bringing all participants to the airport
- settling bills and preparing financial report(when Agency funds are used)
- preparing the report on the activity
- submitting the report( within one month after the event)

The equivalent cost( in monetary units) to the Member States in carrying out the above activities comprises the in-kind contribution

Table 1 shows how the calculations of the in-kind contribution could be made based on the above activities per stage.

Table 1

**Suggested Method of Calculating In-kind Contribution in Hosting Local Events**

PREPARATION STAGE	IMPLEMENTATION STAGE	POST-EVENT STAGE
<p>-In-house planning sessions/meeting with local counterparts  <b>Cost: no. of man-hours spent x cost/man-hour</b></p>	<p>-Provision of secretariat services  <b>Cost: no. of man-hours spent x cost/man-hour</b></p>	<p>-Pick-up service from hotel/accommodations and bringing all participants to the airport</p>
<p>-Liaison work with Foreign Affairs Dept. for visas ; airport authorities; other coöperators</p>	<p>-assistance during the conduct of the opening ceremonies during the event</p>	<p><b>Cost: man-hours x cost per man-hour plus actual cost of transport services</b></p>
<p><b>Cost: No. of man-hours spent x cost/man-hour; plus, transportation costs plus, representation costs(if any)</b></p>	<p><b>Cost: no of man-hours spent x cost/man-hour</b></p>	<p>-Settle bills and prepare financial report(when Agency funds are used)</p>
<p>-Communication  <b>Cost: actual cost of faxes, t<sup>2</sup> el calls, mailing, etc.</b></p>	<p>-shouldering the expenses for use of local facilities( rental of audio visual equipment( if not included in the use of venue), computers, rent of meeting rooms, etc.)  <b>Cost: Actual cost of rental, etc.)</b></p>	<p><b>Cost: actual costs or man-hours spent x cost /man-hour</b></p>
<p>-Arrangements of accommodations, venue, transport services, hosting of social events, field visits  <b>Cost: no. of man-hours spent x unit cost/man-hour, plus cost of transportation( if any)</b></p>	<p>-hosting of a social event by the host institute  <b>Cost: actual cost of function plus no. of man-hours spent x cost/man-hour</b></p>	<p>For the following:            -Preparation of the report on the activity; and</p>
<p>-Follow-up work            -with other involved local organizations;            -arrangements for accommodations, venue of event and local transportation(if including field visits);            -survey of accommodations, and preparing for contract            -survey for local transport services(if no in-house transport services available or inadequate)            -survey for rental of equipment, and other meeting paraphernalia.            -arrangements for hosting of social functions(by the local hosts and by the agency, if required)</p>	<p>-communications expenses( phone calls, faxes, email, telegram, etc.)  <b>Cost: actual expenses</b></p>	<p>-Submission of the report( within one month after the event)</p>
<p><b>Cost: No. of man-hours spent x cost/man-hour</b></p> <p>-Advanced rental or deposit on venue or transport services</p>	<p>- escorting participants to field trips/visits  <b>Cost: actual cost of transport services plus man-hours spent x cost/man-hour</b></p>	<p><b>Cost: No. of man-hours spent x cost/man-hour plus cost of materials and mailing expenses.</b></p>
<p><b>Cost: Actual payment made(if not reimbursed by agency)</b></p>	<p>For the following:            -arranging for return travel of participants            -confirmation of bookings            -local transport to airport arrangement            -local airport courtesy arrangements</p>	<p><b>Cost: man-hours spent/ cost/man-hour plus cost of local transport</b></p>
<p>Arrival of participants and escorting to accommodations.            -meeting at airport and transport to local accommodations</p>	<p><b>Cost: man-hours spent/ cost/man-hour plus cost of local transport</b></p>	<p><b>Cost: no. of man-hours x unit cost/man-hour plus cost of transportation</b></p>

## **TCDC IN THE RCA PROGRAMME:**

### *CURRENT STATUS AND FUTURE PROSPECTS*

- 1. INTRODUCTION**
- 2. REGIONAL COORDINATION OF RCA – TDC ACTIVITIES**
- 3. IMPLEMENTATION OF TCDC ACTIVITIES**
  - 3.1 INTRA-REGIONAL TCDC
    - 3.1.1 Fellowship, Training and Meeting
    - 3.1.2 Establishment of Regional Resource Units (RRU)
    - 3.1.3 Sub-contracting Implementation of IAEA TC Projects
    - 3.1.4 Bilateral Co-operation Arrangements
    - 3.1.5 Triangular Co-operation Arrangements
    - 3.1.6 Multilateral International Nuclear Co-operation in Asia (INCA)
    - 3.1.7 Development of the Directory of Service
  - 3.2 INTER-REGIONAL TCDC
- 4. FUTURE PROSPECTS OF TCDC**
  - 4.1 Joint Operation Arrangements
  - 4.2 Record of In-kind Contribution of TCDC
- 5. CONCLUSION**

### **ANNEXES**

- Annex 1 : TCDC Activities : Training and Meeting for Republic of Korea, Malaysia and Philippines
- Annex 2 : TCDC Project Proposal
- Annex 3 : List of TCDC National Project Coordinator
- Annex 4 : Draft of Directory of Facilities, Services and Experts

(according to country)

## TCDC IN THE RCA PROGRAMME:

### *CURRENT STATUS AND FUTURE PROSPECTS*

#### 1. INTRODUCTION

The concept of Technical Co-operation among Developing Countries (TCDC) was formally endorsed by the United Nations General Assembly in resolution 33/134 of 19 December 1978 in accordance with recommendation 37 of the Buenos Aires Plan of Action for Promoting and Implementing Technical Co-operation among Developing Countries. Today, the majority of partners-in-development including the Governments of Developing Countries, the donor community as well as the United Nations System regard TCDC as potentially valuable instrument for supporting national and regional development efforts and promoting solidarity and mutual support among their peoples.

One of the recognized means of promoting TCDC is building and strengthening technological capacity and capability of various institutions in the developing countries and regions. Such institutions can undertake TCDC activities in the areas of management, training, research and development, expert services and transfer of technology. Networking and twinning arrangements proved to be useful in strengthening institutions by establishing continuing relationships and regular exchanges of expertise and experience between them.

Regional co-operative agreements such as RCA, ARCAL and AFRA are found to be one of the effective vehicles to promote and foster TCDC among its Member States. With the assistance of IAEA, various activities are designed and organized to promote and to apply TCDC concepts. Such activities include management meetings, seminars, workshops, training courses, expert assignments, project formulation and implementation, fellow attachment and transfer of systems and technologies. Some of these activities are implemented using triangular funding arrangements with a United Nations organization alone such as IAEA, UNDP or in association with other United Nations organizations, intergovernmental organizations, NGO and/or private sectors.

#### 2. REGIONAL COORDINATION OF RCA – TCDC ACTIVITIES

In accordance to the Recommendation 11 of the Tripartite Meeting between the three Regional Agreements RCA, ARCAL and AFRA for facilitating TCDC, "*TCDC Contact Point should be established in each Region for improved communication, collaboration and dissemination of TCDC achievements*", the 19th RCA Working Group Meeting in Myanmar, 10 – 14 March 1997 nominated Malaysia as the TCDC Contact Point for the Region. A report entitled "*TCDC in the RCA Programmes: Past activities, Current status and future prospect*", was presented in the 1997 RCA General Conference Meeting, in Vienna. Amongst other issues, the report discussed several mechanisms to facilitate the concept of 'Smart Partnership' in TCDC.

In the 20<sup>th</sup> RCA Working Group Meeting in New Zealand, 30 March – 3 April 1998, Malaysia was once again nominated as the TCDC Contact Point for the Region. It was agreed during the Meeting that Malaysia as a TCDC Contact Point, incorporation with other Member States and the Agency, is responsible for collecting and collating information required for the RCA report to the Tripartite Meeting scheduled for September 1998. It was also agreed that an effective Directory of Services is made available by end of 1998.

This report describes the status of the implementation of some of the TCDC activities in the Region including the development of the Directory of Service as well as the future prospects of TCDC program.

### 3. IMPLEMENTATION OF TCDC ACTIVITIES

#### 3.1 INTRA-REGIONAL TCDC

During 1998, continuous efforts were made towards increased use of Technical Cooperation between Developing Countries. The concept of 'Smart Partnership' in TCDC was emphasized during the recent Project Formulation Meetings (PFM) and wherever appropriate, incorporated at the project formulation stage across the program. The use of regional facilities and expertise in regional activities was identified. Some of the regional TCDC activities such as fellowship, training, meeting, establishment of regional resource center and cooperation/arrangement are illustrated in this report.

##### 3.1.1 Fellowship, Training and Meeting

The Republic of Korea, Philippines and Malaysia have reported the training and meeting activities implemented (and to be implemented) in 1998. They are listed in [Annex 1](#). Malaysia, in addition, is also providing fellowship training and attachment to fellows in the Region. For 1998, there are more than 15 fellows attached to various institutions in Malaysia, receiving training in nuclear related areas in various sectors, namely; agriculture, NDT, radiation technology, nuclear safety and radiation protection. They are from Myanmar, Sri Lanka, Bangladesh, Philippine, Indonesia and Vietnam.

##### 3.1.2 Establishment of Regional Resource Units (RRU)

Several facilities within the National Nuclear Research Institute (NNRI) in the developing countries have taken an increased leadership and mentoring role by acting as a Lead Country for project coordination and implementation, as well as for a Regional Resource Unit for the Region. The Lead Country and RRUs are responsible to coordinate the project and to carry out training activities accordingly. Consequently, there is an increasing 'ownership' regionally, by assuming greater responsibility for the formulation and implementation of regional programs financed by the Agency and other donors.

Several examples illustrate how the concept of TCDC and RRU is applied in the project formulation and implementation:

- ◆ The PFM on RCA/UNDP/IAEA Sub-Project: Networking and Outreach, was hosted by Malaysia on the 9 – 13 March 1998. In RCA WGM in New Zealand Malaysia was nominated as the Lead Country and Malaysian Institute for Nuclear Technology Research (MINT) is the counterpart for the project. The institute is the manager for the RCA homepage and has agreed to contribute to sponsor the cost of maintaining the RCA Internet domain name for period of 3 years. UNDP in addition to cash-contribution, supports the implementation of the project in making available the use of Asia-Pacific Development Information Programme (APDIP) server. Malaysia with the assistance of China and India is developing the RCA homepage. Both MINT and APDIP are identified as training centers for other countries in the Region. MINT also provides expert assistance to countries such as Myanmar and Sri Lanka, in developing Internet facility and national homepage. Australia has developed a Distance Learning Material for Radiation Protection and Emergency Preparedness Training, which can be

accommodated as input to the RCA regional homepage or Australian RCA national homepage. MINT will assume a leading role in the management of the RCA homepage and provision of training and expertise.

- ◆ The National University of Singapore is a Regional Training Center for Tissue Banking to be used by the Region for the training of tissue bank operators. Certification of the diploma course to be provided by the National University of Singapore. This center shall be operated in close liaison and coordination with the Regional Center for Post Graduate Studies in Tissue Banking, established and developed in Mahidol University, Bangkok, by the courtesy of the Government of Thailand.

- ◆ Malaysian Institute for Nuclear Technology Research (MINT) offers its STERIFEED plant for the RCA/UNDP/IAEA Sub-Project on Clean and Energy Efficient Production and Processes: Upgrading of Cellulosic Agrowastes to Useful Products, and working closely with the Japan Atomic Energy Research Institute (JAERI). In November 1998, MINT will host a PFM to discuss the action plan for the project. MINT and JAERI will also provide expert assistance to countries participating in the project.

### **3.1.3 Sub-contracting Implementation of IAEA TC Projects**

Under the concept of 'Smart Partnership' to encourage TCDC, sub-contracting the implementation of the project components under IAEA TC projects is increasingly being applied.

One example of such arrangement is the implementation of the Myanmar TC project (MYA/8/004): Development of NDT Laboratory. Upon request of the Government of Myanmar, the implementation of national training program under this project, is currently being sub-contracted to Malaysia with the financial assistance from the IAEA. Under this arrangement, Malaysian experts will be dispatched to Myanmar to provide training in various fields of NDT. This arrangement is also an extension of the activities under the existing Bilateral Programme: Malaysia Training Cooperation Programme (MTCP), between Governments of Myanmar and Malaysia.

### **3.1.4 Bilateral Co-operation Arrangements**

In 1998, bilateral co-operation arrangement continues to facilitate TCDC activities in the Region. Several arrangements are being renewed and new ones are established. MINT and JAERI have recently extended an Arrangement on the Research Cooperation in the Field of Radiation Processing for another three years. China and Japan continues their bilateral cooperation project on Flue Gas EB Radiation Treatment Plant for Removing Sulfur Dioxide, with the support of the IAEA. Korea Institute of Nuclear Safety (KINS) continues its MoUs with Nuclear Power Engineering Corporation, Japan (NUPEC), National Nuclear Safety Administration (NNSA) and China Institute for Radiation Protection (CIRP), in the various fields related to Nuclear Safety and Radiation Protection.

### **3.1.5 Triangular Co-operation Arrangements**

Another mechanism to promote and to facilitate TCDC concept is through triangular cooperation arrangement. Such arrangement is aimed to encourage developed Member State, namely: Australia, Japan and New Zealand including IAEA as donors to fund the project activities among the developing countries. Implementation of project activities under arrangement of this sort can be further facilitated with the establishment of MoU, between the participating institutes in the countries involved. On the 12<sup>th</sup> of 1998, a MoU between MINT and Standard and Industrial

Research Institute of Malaysia Ltd. (SIRIM BHD), in Malaysia, and Institute of Geological and Nuclear Sciences Ltd. (GNS) in New Zealand was signed to undertake a project in the field of Development and Characterization of Advanced Materials. This MoU contributes towards effective and efficient implementation of the project activities by facilitating the arrangements for scientist exchange visit, expert service, training and dissemination of information. Some of the activities are being financed by the IAEA.

### 3.1.6 Multilateral International Nuclear Co-operation in Asia (INCA)

Australia, China, Japan, Indonesia, Malaysia, Philippines, Republic of Korea, Thailand and Vietnam are currently participating in the International Nuclear Co-operation in Asia (INCA). This co-operation is fully funded by the Government of Japan, specifically designed to complement RCA activities. The areas of co-operation are as follows:

- ◆ Utilization of Research Reactor
- ◆ Application of Radioisotopes and Radiation in Medicine
- ◆ Application of Radioisotopes and Radiation in Agriculture
- ◆ Public Acceptance in Nuclear Energy
- ◆ Safety Culture

Activities under this cooperation include participation in seminar and exchange of research findings and information. The programme has proved to be effective in complementing successful implementation of related projects not only in the RCA programme but also TC and national programmes. In 1999, INCA will be celebrating its Ten Years Anniversary and future plans will be discussed to further strengthen the regional cooperation

### 3.1.7 Development of the Directory of Service

In order to further facilitate the coordination of the TCDC activities in the Region, a project proposal ( [Annex 2](#) ), is formulated taking into consideration the 21 Recommendations and the comments made during the 20<sup>th</sup> WGM in New Zealand. In May 1998, a letter was circulated to all National RCA Coordinators (including RCA Coordinator) requesting Member States to provide comment on the proposal and to nominate a National Project Coordinator for the project. PAK, NZE, IND, BGD, PHI, ROK MAL and Agency have responded. List of National Project Coordinator is shown in [Annex 3](#). Another letter was circulated in August 1998, requesting Member States for additional information on TCDC activities implemented in 1998. Only ROK, PHI and MAL responded.

In the general, the responses received indicate that Member States in principle support the project proposal with a request for a Project Formulation Meeting (PFM) to establish networking structures and to agree on the proposed activities for 1998 – 2000. This meeting unfortunately did not materialized.

A draft of the Directory is compiled based on the information available from the 3 countries. The Directory includes information on availability of facilities and major equipment, expertise, R & D, training and fellowship programs, supply of materials, established cooperation under bilateral and multilateral cooperation and members of the facilities as well as the contact person. Information related to the on-going RCA and RCA/UNDP/IAEA projects is to be given priority in the Directory since the information will contribute towards timely implementation. The draft of the Directory of Facilities, Services and Expert is shown in [Annex 4](#). The draft will be further developed and improved as more information is received from the Member States.

### 3.2 INTER-REGIONAL TCDC

In 1997/1998, TCDC inter-regional concept has gained momentum in the Region, particular involving fellowship training and attachment programme. 2 fellows from Latin America were on the job-training in MINT, in the field of tissue banking. 10 fellows from Africa were attached to various universities and research institutes in Malaysia, mainly in the field of agriculture.

Organization of international conference is another activity, which is in line with TCDC inter-regional concept. China Institute of Atomic Energy (CIAE) is hosting an International Conference on Nuclear Analytical Methods in Life Sciences, in Beijing in September 1998. Malaysia will be hosting 7<sup>th</sup> International Conference on Tissue Banking, on the 24 – 26 November 1998. This conference is jointly organized by the Ministry of Health, Malaysia Institute for Nuclear Technology Research (MINT), IAEA and Malaysian National Tissue Bank, with the support of NGO, namely; Malaysian Orthopaedic Association and Malaysian Transplant Society. Involvement of the NGO contributes toward increase awareness and acceptance of the technology related to tissue sterilization, grafting, culture and tissue banking. The conference also sponsors some participants regionally and inter-regionally under the spirit of TCDC.

In 1999, Malaysia will host 7<sup>th</sup> International Conference on Radiation Curing: RADTECH ASIA '99 on 24-26 August 1998. RADTECH Asia EXPO '99 will also be held in conjunction with the Conference. The event is to be jointly organized by Malaysia Institute for Nuclear Technology Research (MINT) and Malaysian Nuclear Society (MNS), in collaboration with the IAEA, university and related industries in the Region. Spirit of TCDC is also applied in this conference.

## 4. FUTURE PROSPECTS OF TCDC

In 20<sup>th</sup> RCA Working Group Meeting in New Zealand, it was discussed that there must be strategic initiatives and closer integration between TCDC and economic Co-operation among developing countries (ECDC). The concept of a "Smart Partnership" should be encouraged and continued in the future TCDC activities. More activities should be implemented regionally and inter-regionally under the already established mechanisms, namely:

- ◆ Sub-contracting Implementation of IAEA TC Projects
- ◆ Establishment of Regional Resources Units (RRUs)
- ◆ Bilateral Cooperation Arrangement
- ◆ Triangular Cooperation Arrangement
- ◆ MoU between Donors and Recipient Institutes
- ◆ Networking and Dissemination of Information
- ◆ Establishment of Regional Model Project

### 4.1 Joint Operation Arrangements

The current economic situation in the Region, presents difficulties for many counterpart institutions to provide assistance and service, on individual basis to meet the demand of the end-users. The difficulties are due to several reasons, namely; insufficient qualified staff, lack of equipment/facilities, lack of initial capital to facilitate the work. It is thus proposed that a joint operation arrangement to be established to undertake any assignment in the Region.

For instance, there is a job to be carried out in Sri Lanka. Malaysia may have the expertise and the equipment/facilities, but lack of manpower to undertake the job. Indonesia on the other hand, has the manpower but lack of operational equipment. Thus, a joint operation arrangement would be established between Malaysia and Indonesia complementing each other, to undertake the job in Sri Lanka. Some forms of assistance may be sought, if required, either from the IAEA or

donor Member States in the Region. This arrangement will lead to more effective and efficient delivery of job to the industry. Consequently, there will be increase awareness and acceptance of the technology.

In this regard, the availability of Directory of Facilities, Services and Experts in the Region would assist in coordinating not only the implementation of the on-going projects but also the needs of the end-users in the Region.

#### **4.2 Record of In-kind Contribution of TCDC**

The contributions and the impact of TCDC activities towards the technological and economic development in the Region are well recognized by Member States and the IAEA. However, records on all the important and valuable contributions are still not established. It is proposed that Member States should find means to capture this information. A fixed formula to value the TCDC activities should be agreed upon by the Member States, taking into consideration the variations in value of the contributions when carried out in different economies. This is essential in order to provide true pictures and real values of the contributions.

### **5. CONCLUSION**

The success of the TCDC activities would depend very much on the commitment of the donors, both developed Member States and the IAEA, in term of fund, and the commitment of developing countries in term of infrastructure, financial and human resources including expertise available. TCDC is a valuable concept for Member States to achieve regional self-reliance in the peaceful application of nuclear science and technology, and thus for supporting national and regional development efforts, and promoting solidarity and mutual benefits among the developing countries.

### **REFERENCES**

1. Dr. Ahmad Sobri Haji Hashim, TCDC in the RCA Programme: Past Activities, Current Status and Future Prospects, September 1997, Malaysia.
2. Report on 20<sup>th</sup> RCA Working Group Meeting in New Zealand, 30 March – 3 April 1998.
3. Country Statements of RCA Member States.
4. RCA Annual Report 1996 –1997.

### **ACKNOWLEDGEMENT**

Appreciation to all the Member States and the IAEA for providing the information.

**DR. AHMAD SOBRI HAJI HASHIM**  
September 1998.

**TCDC ACTIVITIES : Training , Workshop and Meeting Hosted by Malaysia,  
Republic of Korea and Philippines**

<b>MALAYSIA</b>	
1.	PFM on RCA/UNDP/IAEA Project : Subproject Air Pollution, 9-13 March 1998
2.	PFM on RCA/UNDP/IAEA Project : Subproject Electronic Networking and Outreach, 9-13 March 1998
3.	RTC on Radioisotope Sealed Sources and Radiotracer Applications in Oil and Gas Industries, 18-29 May 1998
4.	RW on Maintenance of X-ray and Gamma Ray Industrial Radiography Apparatus for Safety and Productivity of Test, 26-30 Oct. 1998
5.	RW on Salt Assessment Review and PA in Tissue Banking, 23-27 Nov. 1998
6.	PFM on RCA/UNDP/IAEA Project : Subproject Clean and Energy Efficient Production Processes, 16-20 Nov. 1998

<b>KOREA</b>	
1.	Project Formulation Meeting on Energy and Research Reactor, 23-27 March 1998
2.	FAO/IAEA(RCA)/ICGF Workshop on Harmonization of Procedures and Regulations on Food Irradiation for Asia and the Pacific, 27-29 April 1998
3.	IAEA/RCA Training Course on Comparative Assessment of Nuclear Power and Other Energy Sources in Support of Sustainable Energy Development, 8 June – 3 July 1998
4.	IAEA/RCA Training Course on Externalities Associated with Electricity Generation : Concepts and Estimation, 28 Sept. – 2 Oct. 1998
5.	IAEA/RCA Regional Workshop on Regional Cooperation for Nuclear Power Planning with Emphasis on Strategies for Localization, Standardization and Technology Transfer, 23-27 Nov. 1998
6.	IAEA/RCA Workshop on Factors to be considered in choosing the Nuclear Power Option, December 1998

<b>PHILIPPINES</b>	
1.	Two Project Formulation Meetings on Access to Clean Drinking Water and on Marine Contamination, 23-27 February 1998
2.	Regional Training course on Radiation Sterilization of Tissue Grafts, 17-21 August 1998
3.	Regional Training Course on Economic Analyses of Nuclear Electricity Generation Costs and Comparison with other Energy Sources, 5-9 Oct. 1998
4.	Research Coordination Meeting on Radiation Processing of Indigenous Natural Polymers, 9-13 Nov. 1998
5.	Demonstration of Predisposal Waste Management Methods and Procedure, 30 Nov. – 11 Dec. 1998

## PROJECT FRAMEWORK MATRIX

<b>Project Number:</b> RAS/0/025	<b>Project Title:</b> TCDC among the RCA countries	<b>Last Update:</b>
<b>Project Officer:</b>		
<b>Main Coordinator:</b> Dr. Ainul Hayati Daud		
<b>Technical Officer:</b>		
<b>Organisation:</b> Malaysia Institute for Nuclear Technical Research (MINT)		

	Project Design Elements	Verifiable Indicators	Means of Verification	Important Assumptions
<b>1.0 Development/ Overall Objective</b>	To foster and facilitate technical cooperation among developing countries (TCDC) towards achieving regional self-reliance and cooperation in the nuclear field	Comprehensive report on the implementation of the TCDC activities including cost, impact	Reports and records of activities implemented	All RCA countries maintain their commitments to implement the project according to the agreed work plan.
<b>2.0 Specific Objective</b>	To facilitate the implementation of nuclear development activities cost-effectively, through the utilization of regional capabilities and established facilities	Reports on the implementation of the activities	Reports and records of activities implemented	- ditto -
<b>3.0 Project Outputs</b>				
<b>3.1</b>	Establishment of networking structures for TCDC	Adopted document	Agreed document sent to the IAEA after meeting	- ditto -
<b>3.2</b>	Document on training and research facilities including major equipment available in RCA MS for TCDC ( <i>Recommendation 13</i> )	Published document	Material available to all RCA countries and the IAEA	- ditto -
<b>3.3</b>	Document on expert / expertise available in RCA MS for TCDC ( <i>Recommendation 13</i> )	Published document	Material available to all RCA countries and the IAEA	- ditto -
<b>3.4</b>	Document on proposed training activities of RCA MS for future years ( <i>Recommendation 13</i> )	Published document	Material available to all RCA countries and the IAEA	- ditto -

3.5	Database on training, research facilities and expertise available for TCDC ( <i>Recommendation 13</i> )	Database	Material available all RCA countries the IAEA	- ditto -
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3.6	Linkage to RCA Homepage – a section in RCA Homepage on TCDC : Newsletter ( <i>Recommendation 12 &amp; 14</i> )	Established linkage	Progress report of project Electronic Networking	- ditto -
3.7	Annual financial report of TCDC program ( <i>Recommendation 10</i> )	Document of Financial Report	Report	- ditto -
3.8	Linkages to the AFRA, ARCAL and UN(New York) TCDC Program ( <i>Recommendation 13</i> )	Established linkage and report	Report on the TCDC program	- ditto -
4.0 Activities 4.1	Meeting of project coordinator to establish networking structures and to agree on the proposed activities of TCDC ( <i>Recommendation 11</i> )	Meeting report on networking structure	Meeting report	Meeting organised, activities identified and work-plan agreed upon
4.2	Developing format to facilitate data collection for training facilities and expertise in the region ( <i>Recommendation 9</i> )	Agreed format for data collection	Project counterpart report	All RCA countries maintain their commitments to provide information on training activities, expert job description and facilities required to carry out the activities
4.3	Updating and compilation of training and research facilities (including major equipment ) available in RCA MS ( <i>Recommendation 8</i> )	List of training and research facilities	Project counterpart report	- ditto -
4.4	Updating and compilation of expert / expertise available in RCA MS ( <i>Recommendation 8</i> )	List of expert / expertise	Project counterpart report	- ditto -
4.5	Compilation of proposed training activities of RCA MS for future years ( <i>Recommendation 8</i> )	List of proposed training activities	Project counterpart report	- ditto -
4.6	Coordination of the implementation of training activities through TCDC . eg. selection of experts and identification of training venues	List of experts and training drawn up	Project counterpart report	- ditto -

(Recommendation 8)

4.7	Preparation of report for the Tripartite Meeting of RCA, ARCAL and AFRA Development of program and activities for the Interregional TCDC among the 3 regions ( <i>Recommendation 15</i> )	Progress report on the implementation of the TCDC	Reports from Lead Country to the Tripartite Meeting of RCA, ARCAL and AFRA	- ditto -
4.8	Meeting of project coordinators regionally and inter-regionally, as well as participation in the Tripartite Meetings of RCA, ARCAL and AFRA ( <i>Recommendation 6 &amp; 15</i> )	Progress report on the implementation of the TCDC	- ditto -	- ditto -
4.9	Establishing common accounting and reporting system for TCDC activities within the three Regions ( <i>Recommendation 10</i> )	Progress report on the implementation of the TCDC	- ditto -	- ditto -
4.10	Establishing twin institutions within the Regions and between Regions ( <i>Recommendation 7</i> )	Progress report on the implementation of the TCDC	Reports from the project counterparts	- ditto -
4.11	Establishing linkage with the RCA Homepage - Project Electronic Networking	Progress report on the implementation of Project Electronic Networking	Project counterpart report on Project Electronic Networking	Lead country for Project Electronic Networking established the facility
<b>5.0 IAEA Inputs</b>	<b>Making available the following items required to support the implementation of the project</b>			<b>PRECONDITIONS</b>
5.1	Fund to assist MS in the development, implementation and promotion activities of TCDC ( <i>Recommendation 1 and 2</i> )	Financial Report on RCA Activities	Financial Reports of the IAEA	Inputs are provided in timely manner to the Lead Country for TCDC
5.2	Provision of list of experts from RCA MS, including the Expert Personnel History (EPH), available in the TC Department, IAEA to TCDC Lead Country.	List of experts from RCA MS in the forms of document (hard copy) and Electronic – data	List of experts made available through the RCA MS	- ditto -
5.3	Provision of list of training center and research facilities of RCA MS, which is available in the TC Department, IAEA to	List of training center and research facilities of RCA MS in the forms of document (hard	List of training center and research facilities made available through the RCA	- ditto -

	TCDC Lead Country.		copy) and Electronic -- data	MS	
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6.0 COUNTER PART / MEMBER STATES Inputs	Making available the following items required to support the implementation of the project	Financial Report on RCA Activities	Financial Reports of the IAEA	PRECONDITIONS
6.1	Contribution to assist in the development, implementation and promotion activities of TCDC ( <i>Recommendation 3</i> )	List of experts from RCA MS in the forms of document (hard copy) and Electronic – data	List of experts made available through the IAEA	Inputs are provided by the RCA MS, according to the format / request of the Lead Country TCDC  - ditto -
6.2	Provision of recent (up-dated) list of experts from RCA MS, including the Expert Personnel History (EPH), available in the RCA MS for TCDC program to TCDC Lead Country.	List of training center and research facilities of RCA MS in the forms of document (hard copy) and Electronic – data	List of training center and research facilities made available through the IAEA	- ditto -
6.3	Provision of recent (up-dated) list of training center and research facilities (including major equipment) available in the RCA MS for TCDC program to TCDC Lead Country	List of proposed training activities of RCA MS for future years, including training prospectors and expertise required	Report of the RCA Activities	- ditto -
6.4	Provision of list of proposed training activities of RCA MS for future years, including training prospectors and expertise required	List of recent (up-dated) list of twins institutions within the regions and between the regions to TCDC Lead Country	List of twins institutions within the regions and between the regions made available through the IAEA	- ditto -
6.5	Provision of recent (up-dated) list of twins institutions within the regions and between the regions to TCDC Lead Country	List of equipment, refurbished equipment, materials eg radioisotope, available within the regions and between the regions which can be provided / shared to supported TCDC Program	List of equipment, refurbished equipment, materials eg radioisotope, available	- ditto -
6.6	Provision of list of equipment, refurbished equipment, materials eg radioisotope, available within the regions and between the regions which can be provided / donated / shared to supported TCDC Program			







**REVISED PROVISIONAL AGENDA  
TRIPARTITE MEETING - AFRA, ARCAL and RCA  
24<sup>th</sup> SEPTEMBER 1998, Room V,C07. 15:00 - 17:00**

**CHAIRMAN: RCA**

**Objective: To identify and agree on concrete TCDC areas of co-operation to be implemented by the three Agreements including modalities and procedures to be used.**

- Opening

1. Statement by the Chairman

- Presentation of the participants
- Presentation and adoption of the provisional agenda

2. Statement of the DDG-TC

3. Follow-up on the implementation of the recommendations adopted (by the three Agreements) on TCDC.\*

4. Identification of possible areas of co-operation among the three Agreements and modalities for implementation.

- Conditioning of radioactive spent sources
- Distance Assisted Training Programme for Nuclear Medicine Technologists
- Hydrology (Dam Leakage and Safety, Pollution of Water Supply)
- Harmonization of regulatory procedures in selected fields of interest
- Harmonization of the procedures to accelerate/promote TCDC activities between the three Agreements

5. Preparation of the 1999 Tripartite Forum for promoting TCDC

- Draft agenda
- Documents to be prepared
  - a) on the functioning of the Agreements
  - b) on the main results achieved in selected areas
  - c) on common areas of interest for co-operation

Note:

\* Each Agreement Representative will make his own presentation. A common document will be prepared by the three RPCs and circulated prior to the meeting.

- Participants:

5 representatives from each Agreement; donor countries and observers from Europe and West Asia. The Chairman (or his/her Representative) of the Vienna based Regional Groups will also be invited.

- Venue and dates:

a) Vienna, during the General Conference (1999)

b) One day.

6. Preliminary exchange of views on how to promote ECDC among the three Agreements.
7. Centres of excellence: Regional Resources Unit - specialized teams.
8. Other matters
9. Adoption of the recommendations/conclusions of the meeting.
10. Closure

98-07-24

## PROJECT PROPOSAL

**TITLE:**           **PROMOTION OF TCDC MODALITY AMONG REGIONAL AGREEMENTS (AFRA, ARCAL, RCA) (TENTATIVE)**

**OBJECTIVES:**

- 1) To facilitate the use of TCDC modality through the exchange of expertise and resources within the regions in solving concrete problems in selected areas;
- 2) To improve co-ordination/collaboration mechanisms and promote harmonized procedures among the three regional agreements;
- 3) To forge stronger links among Member States of the agreement, for cooperative undertakings using TCDC and ECDC modalities

**Duration: 1999-2001 (3 years)**

**BACKGROUND:**

Representatives of the three Regional Agreements—AFRA, ARCAL and RCA, have been exchanging views during the last three years regarding the possibility of making full use of TCDC modality for solving common problems within and between their respective regions. At the tripartite meeting, held in July 1996 in Vienna, Austria, the Representatives of the three Agreements adopted a series of recommendations which reflect Member States' determination to make full use of the TCDC modality to promote concrete activities within and between the three regions to solve common problems and to harmonize practices and procedures. Special emphasis has been placed on the use of existing expertise and infrastructure to minimize costs.

The successes of the different projects in one of these three agreements provide a vehicle for promoting TCDC by sharing the information with the other. For example, in AFRA a specialized team to address the concerns of dam leakage was created following the experience of ARCAL in this field. In RCA the Member States developed distance learning materials such as on nuclear medicine, which is being introduced to countries in Africa through AFRA.

These concrete examples of success stories in certain projects could be duplicated in many more areas with significant savings in time and costs. Selected areas where exchange of expertise and resources could be made are isotope hydrology applications, immobilization of spent sources, harmonization of radiation protection and safety rules, guides and procedures, among others. The exchange of information would facilitate identification of technologies and expertise available in one region which could benefit or could be applied in the other regions with marked benefits.

Regional resource units and/or centres of excellence exist in many areas among the three regional agreements. In ARCAL three regional centres were established to train technicians in repairing detectors, multi-channel analysers and

gamma cameras. These provide a source of technology, expertise and services and venue for training; there are also technologies which provide a basis for economic cooperation among developing countries which could be identified. In AFRA specialized teams were formed for auditing practices in nuclear medicine and radiotherapy, repair of instruments and immobilization of radioactive radium sources<sup>1</sup>. In RCA regional resource units have been identified to undertake activities and provide support and expertise related to applications of nucleonic control systems, sealed sources and tracers in industry, radiation processing of natural rubber latex for industrial and medical use, non destructive testing, hydraulic modeling related to development in coastal marine environment, radiation protection and tissue banking, to name a few. These concrete examples prompted the need to finalize the desire of Member States to promote cooperation among themselves and to pave the way for the establishment of the framework which shall ensure sustainability to their efforts.

### **PROJECT WORKPLAN:**

The Representatives of the Member States of the three Agreements and the Agency shall identify concrete applications of nuclear techniques of common interest, define the modalities of cooperation as well as the cost-effectiveness of each activity. An accurate inventory of the expertise and infrastructure available in each region should be made. Harmonized procedures and practices will be compiled and made available to all Member States in the three regions. A tripartite meeting will be at least once a year to agree on the main orientations and policies, review progress made, and decide on corrective measures if necessary. A detailed workplan for the project duration will be presented for approval to the tripartite meeting in 1999. The IAEA' Agreement coordinators will monitor and coordinate the project activities and ensure smooth implementation.

### **REGIONAL COMMITMENT:**

Each Member State shall, unless already done so, nominate a focal point for TCDC who shall coordinate and monitor the implementation of the project activities in his/her country. Donor and recipient countries shall work out ways and means for the successful implementation of the undertaking. The host of meetings/workshops under this project shall provide at no cost premises, local transportation and lecturers as required.

### **NATIONAL COMMITMENT:**

The Member State which is the recipient country or "taker" should provide necessary local administrative and technical backup to the representatives of the technology source or "giver" agreement.

The Member State of the "giver" agreement shall contribute their expertise when called upon to the planning session to develop the detailed plans, or to participate in a mission to other regional agreements, if so required.

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<sup>1</sup> There may be other examples of RRUs and/or centers of excellence.

**AGENCY INPUTS:**

The Agency inputs will be required to support the following:

- Group activities to help in the detailed planning of activities for selected areas;
- Provision of funds to undertake expert missions to the regions where requested and justified
- Consultancy services for developing TCDC modalities and ECDC programme, and harmonization of procedures

**EXPECTED OUTPUTS:**

Identified and agreed upon selected areas to be implemented;  
Detailed project plan for the selected areas;  
Implemented activities based on the agreed plan;  
Mechanisms or collaboration among the agreements established and enhanced.

**PROJECT IMPACT:**

Optimization of use of resources among the three (3) Regional Agreement Member States;  
Wider technology transfer and dissemination of selected nuclear techniques and applications;  
Enhanced collaboration among the agreement member states.

**BUDGET : FIRST Three YEARS ONLY**

	<u>Experts</u>	<u>Group Activity</u>		
1999	4 mm	40,000	---	---
2000	6 mm	60,000	--	---
2001	4 mm	50,000	--	---



## ADVISORY GROUP

At the last RCA Meeting of National Representatives in Taupo, New Zealand, Member States agreed to create an Advisory Group consisting of high-level experts, with a broad background, to meet and consider the overall policy directions and management of all aspects of the industry-related projects. Its purpose would be:

- (1) To guide future project formulation meetings and related activities
- (2) to promote the twin needs of activities related to problem-solving and capacity building,
- (3) To integrate activities which appear to be driven by technology or the needs of the end-users.

Criteria need to be established (1) for the selection of members and (2) for identifying and assessing the priority ranking of the issues to be discussed by the group.

A proposed set of criteria was drawn up by the RCA office and circulated to MS for their comments as shown in the following tables.

**Table 1 Criteria for Selecting Members**

Criteria	Comments received from Member States
<p>1. Must have worked in applications of nuclear techniques for industrial applications for at least 10 years.</p>	<p>BGD: agreed impliedly to criteria and nominated a person .            CPR: agreed with the purpose. Agreed with selection criteria for members.            IND: agreed impliedly to the criteria and nominated a person.            INS: group should consist of senior people, preferably those who are more involved with policy and management affairs at country level, rather than those who are experts in some specific fields. Criteria point more towards senior scientists rather than senior policy/decision makers. Membership should be nominated by the Member States but the final decision to be made by the IAEA as a neutral body.            Criteria for setting priorities to be developed by the Advisory . the suggested criteria are very good and could be used as inputs for the Advisory Group.            MAL: while experience and practice of the application of nuclear techniques is important, a 10-year period is too long; this should be changed to 5 years experience to be a must and 10 years to be preferred.            NZE: the Advisory group is to meet once make recommendations and disband.            THA: Agreed to the proposed criteria for selection of members and for the setting of priorities. Named four(4) persons for consideration.</p>
<p>2. Possess an advanced degree in engineering and physical sciences</p>	<p>THA: added “/or” to read, “possess an advanced degree of engineering and/or physical sciences.</p>
<p>3. Be active in the practice of one of the following techniques: NDT, Nucleonic control system(NCS); Nuclear analytical techniques(NAT); Radiation Technology(RT) and Tracer techniques(TT).            Have served as an expert or consultant (in his/her field of specialization) for the agency or another international organization</p>	<p>MAL: Member need not be an active practitioner but should have a broad outlook/understanding of the applications. The active practitioner could fail to see the broader picture, i.e., missing the forest for the trees.</p>

**Table 2: Criteria for the Setting of Priorities**

	<p>BGD: Suggested topics on the setting of priorities  INS: Should be developed by the members of the advisory group.  NZE: On the criteria for setting priorities, has difficulty in understanding the criteria as set out in items 1-7. The Advisory group is intended to deal with overall policy issues for RCA; the problems it addresses are a concern of all Member States; all are Target countries; the activity (if this means the Advisory Group) is of high importance.  Criteria 4,5 and 6 seem inappropriate for this type of activity and seem related to a PFM rather than an Advisory Group with a single overall purpose.  For criterial number 7, this type of activity should be funded from UNDP/RCA?  Resources on the basis of expenses only.</p>
<p>1. What are the problems or concerns to be addressed in this activity? Are these perceived or real problems?(real problems would rank higher)</p>	<p>MAL: Salient points have ben included; however there is potential for unresolved priority positions if numerical score is used and if each criterion bears equal weight.</p>
<p>2. Which Member States have this problem? Who are the target countries for this activity(Most number of member states with problems ranks highest)</p>	<p>MAL: If scores for criteria 2 and 3 are high, criteria 4 and 5 should also be expected to score high, and they could be accorded equal weight.</p>
<p>3. What importance do the Member States attach to this activity: high, medium, low?(the greatest number of 'highs' will be ranked highest)</p>	
<p>4. What infrastructure/resources (including manpower) are already in place in the target countries for this activity?</p>	
<p>5. What commitments, in terms of resources, (e.g. cash contribution, in-kind contributions, hosting of events etc) are the Member States prepared to give to this activity? (the activity with the greatest number/amount of commitments would rank the highest)</p>	

<p>6. What result/output can be expected from this activity?</p> <ul style="list-style-type: none"> <li>-can directly solve the problem;</li> <li>-can develop the local expertise to eventually solve the problem;</li> <li>-can provide guidance in solving the problem</li> <li>-will provide recommendations to member states on improving the situation, e.g., radiation protection measures</li> <li>-others(please specify)</li> </ul>	<p>MAL: Criterion 6 must be given highest weight.</p>
<p>7. Who are expected to fund this activity;</p> <ul style="list-style-type: none"> <li>-Member States, IAEA or others?</li> </ul>	

NZE: Agreed on purpose (1) above; and suggested the following: purpose (2) "Ensure that all activities promote capacity building based on a need to solve practical problems" and (3) "Ensure projects presented for IAEA, RCA or external funding are appropriately balanced between the needs of the end users and the applications of the technologies.

On request for names: Membership should be balanced between developed/developing countries and between countries that promote the concept of an end user, applications focus for projects and those that prefer to base projects on nuclear technologies. Candidates tending to the former view are Indonesia, New Zealand and Australia; Candidate countries tending to the latter view are Pakistan, India and Japan.

## **Table 1. Criteria for Selecting Members**

1. Must have worked in applications of nuclear techniques for industrial applications for at least 10 years.
2. Possess an advanced degree in engineering and physical sciences
3. Be active in the practice of one of the following techniques: NDT, Nucleonic control system(NCS); Nuclear analytical techniques(NAT); Radiation Technology(RT) and Tracer techniques(TT).  
Have served as an expert or consultant (in his/her field of specialization) for the agency or another international organization

## Table 2. Criteria for Setting Priorities

1. What are the problems or concerns to be addressed in this activity? Are these perceived or real problems?(real problems would rank higher)
2. Which Member States have this problem? Who are the target countries for this activity(Most number of member states with problems ranks highest)
3. What importance do the Member States attach to this activity: high, medium, low?(the greatest number of 'highs' will be ranked highest)
4. What infrastructure/resources (including manpower) are already in place in the target countries for this activity?
5. What commitments, in terms of resources, (e.g. cash contribution, in-kind contributions, hosting of events etc) are the Member States prepared to give to this activity? (the activity with the greatest number/amount of commitments would rank the highest)
6. What result/output can be expected from this activity?
  - can directly solve the problem;
  - can develop the local expertise to eventually solve the problem;
  - can provide guidance in solving the problem
  - will provide recommendations to member states on improving the situation, e.g., radiation protection measures
  - others(please specify)
7. Who are expected to fund this activity;
  - Member States, IAEA or others?

## Annex 19 Tables for Actions and Recommendations of the Meeting

Agenda Item	Actions and Recommendations
<p>2. Adoption of the 1997 RCA Annual Report</p> <p>3. Adoption of RCA 20<sup>th</sup> Regular Meeting of Representatives Report</p>	<p>i) A simple format was already available and Member States were urged to follow this format and submit the report as soon as possible after completion of each activity.</p> <p>ii) Achievements of closed projects should be highlighted.</p> <p>In the future, a table on actions and recommendations should be attached as an annex so that it can be systematically followed up by both the Agency and Member States.*</p>

\*This annex is a result of this recommendation.

Agenda Item	Actions and Recommendations
<p>6. and 7. Presentation of RCA Activities for 1998, Projects to be Closed in 1998, and Program for 1999-2000 Cycle</p>	<ul style="list-style-type: none"> <li>i) The RCA Office was requested to study, with due diligence and urgency, the possibility of rearranging unallocated leftover funds to support fully developed projects such as the Radiation Oncology project,</li> <li>ii) The RCA Office is seeking the agreement and/or confirmation from Member States to host events that are identified and suggested on the list of regional events under the programme for 1999-2000,</li> <li>iii) The RCA Office was requested to provide detailed work plans to Member States to help them monitor the progress of programme,</li> <li>iv) All National Representatives and National Project Co-ordinators will provide all possible assistance and facilitate the implementation of RCA activities within their own countries,</li> <li>v) Member States are invited to submit nominations of new National Project Coordinators for new projects for 1999-2000 cycle.</li> </ul>



Agenda Item	Actions and Recommendations
8.4 RCA Vision Milestones	<p>The Meeting -</p> <ul style="list-style-type: none"> <li>i) <u>agreed</u> that the Vision Statement should be finalized as soon as possible by taking into account the comments from Member States,</li> <li>ii) <u>recommended</u> that Member States send further comments on the milestones to the RCA National Representative of Indonesia and the RCA Office as soon as possible, and that practical steps as needed urgently.</li> </ul>
8.5 Recording In-Kind Contributions	<p>The Meeting -</p> <ul style="list-style-type: none"> <li>i) <u>requested</u> the Agency to provide information on average or standard rating for conducting particular activity,</li> <li>ii) <u>recommended</u> that Member States continue to submit man-days or man-hours or best estimates of cost and a list of events for the consideration of the Agency.</li> </ul>
9. TCDC Tripartite Meeting	<p>The Meeting <u>noted</u> the paper on "TCDC in the RCA programme" and <u>urged</u> Member States to provide comments.</p>
9.2 Proposal on TCDC	<p>The Meeting -</p> <ul style="list-style-type: none"> <li>i) <u>requested</u> the RCA Office to ensure that there should be a follow-up report to Member States on the outcome of any TCDC Tripartite meeting.</li> </ul>

Agenda Item	Actions and Recommendations
<p>11. Other Matters</p> <p>11.1. Formation of Advisory Group</p>	<p>The Meeting -</p> <p>i) <u>requested</u> the Agency to consider the need of reformulation of the basis of the Advisory Group meeting with broad objectives and to seek the possibility of holding the meeting for the thematic programmes of 2001-2002 project cycle before the next Regular Meeting of National Representatives of RCA Member States in Singapore,</p> <p>ii) <u>agreed</u> that, in principle, the selection criteria will be senior policy makers who are aware of the national development programs and <u>requested</u> Member States to review the criteria and send comments to the RCA Office within two weeks.</p>
<p>11.2 High Level Participation</p>	<p>The Meeting <u>noted</u> that this is a political issue to a large extent and <u>invited</u> the Agency to prepare a paper for the circulation to Member States for their comments.</p>
<p>11.3 RCA Membership</p>	<p>The Meeting <u>noted</u> the information provided by the RCA Office on the membership of Yemen, and <u>recommended</u> the Agency to send a formal letter to RCA Member States for considerations.</p>
<p>11.4 Numbering of Meetings and Reports</p>	<p>The Meeting <u>requested</u> the Agency to seek a most appropriate way for numbering the meetings and reports and to inform Member States of the results.</p>

