



REGIONAL CO-OPERATIVE AGREEMENT  
INTERNATIONAL ATOMIC ENERGY AGENCY



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# REPORT

NINETEENTH GENERAL CONFERENCE MEETING  
OF  
REPRESENTATIVES OF RCA MEMBER STATES

IAEA — Vienna, 19 September 1990



# **REPORT**

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## Table of Contents

	<u>Page</u>
General	1-2
Report by RCA Co-ordinator	3
RCA Annual Report	3-5
Twelfth RCA Working Group Meeting	6
RCA Programme 1991	6
Other Business	6-8
Summary of Decisions	8-9
Closing	9
Annex 1	List of delegates
Annex 2	Opening Remarks - DDG-TC
Annex 3	Agenda
Annex 4	Statement by Meeting Chairman
Annex 5	Report by RCA Co-ordinator
Annex 6	Country Statement - China
Annex 7	Country Statement - Indonesia
Annex 8	Country Statement - Japan
Annex 9	Country Statement - Malaysia
Annex 10	Country Statement - Philippines
Annex 11	Country Statement - Thailand
Annex 12	Country Statement - Viet Nam
Annex 13	RCA Programme 1991



Nineteenth General Conference Meeting of  
Representatives of RCA Member States

10:00h Wednesday, 19 September 1990

Conference Room V, C07, IAEA Headquarters

The Meeting was attended by twenty-three delegates representing all Member States with the exception of Singapore and Sri Lanka. A list of delegates is attached as Annex I.

The meeting was opened by the interim Chairman, Mr. David Cook, Executive Director, Australian Nuclear Science and Technology Organisation, Australia. He noted his pleasure at having presided over the RCA during such an active and successful year. One of the highlights of the year had been the UNDP Mid-Term Review of the Industrial Project, which pointed to the very real benefits being obtained from the project. He welcomed the increasing participation of Viet Nam and looked forward to continued fruitful collaboration.

He went on further to note that this year also marked the departure of Mr. Peter Airey from the RCA Co-ordinator position. He wished to record thanks to him for his valuable and energetic contributions over the years and for the support he provided to him as Chairman of the Working Group Meeting in 1989.

He further noted with pleasure Dr. Blix's decision to appoint Mr. John F. Easey to succeed Mr. Airey and expressed confidence that he will continue the good work.

He invited the Deputy Director General, Department of Technical Co-operation to present his welcome on behalf of the IAEA. Mr. Noramly highlighted the major achievements of the past year. He felt that consideration should be given to the future of RCA with regard to its funding and the need for new donors. A full text is presented in Annex 2.

The election of the Chairman then proceeded. Dr. Suchat Mongkolphantha, Secretary General, Office of Atomic Energy for Peace, Ministry of Science, Technology and Energy, Bangkok, Thailand, was nominated by Viet Nam seconded by India and unanimously elected. Dr. Suchat expressed appreciation to the outgoing Chairman for his support and thanked the delegates for their confidence.

He wished to place on record the letter of appreciation he had received from Professor Hammad, Chairman of the first AFRA Technical Working Group, following the message of best wishes and congratulations sent on behalf of the 12th RCA Working Group Meeting. The Chairman's full statement is presented as Annex 3.

Following the adoption of the Agenda (Annex 4), the Chairman invited the RCA Co-ordinator to present his report.

Report by RCA Co-ordinator

In his report, the RCA Co-ordinator outlined the important issue concerning the future funding of RCA. RCA relies financially on the support of UNDP, the Agency and extra-budgetary and in-kind support of Australia and Japan. He also went on to mention that the current RCA Agreement is due to expire on 11 June 1992. He requested delegates to propose any changes to the RCA Agreement to the next Working Group Meeting in Ho Chi Minh City in March 1991. The full text of the report is attached as Annex 5.

RCA Annual Report 1989

The Chairman introduced the report and invited Member States to comment. Due to time constraints he requested delegates who wished to give a country statement to submit it in writing to the Secretariat at the closure of the meeting. These statements would be incorporated in the official record of the meeting.

The delegate from Australia said consideration might be given to formulating an amendment to the RCA Agreement using the AFRA Agreement as an example to achieve a simpler format.

The DDG-TC requested the AFRA Agreement to be circulated to Member States for perusal followed by further consultations and discussions at the next Working Group Meeting.

The Chairman invited the RCA Co-ordinator to comment on the future of the Industrial Project for which UNDP funding is only assured until the end of 1991. The RCA Co-ordinator said that the present cycle of UNDP funding should be allowed to terminate in December 1991 and that a new project proposal would be put to UNDP for support. The reasons behind the decision were complex but basically the major influences were: the fact that the present project is in its second 5-year phase; UNDP do not encourage the continuation of funding past one 5-year phase; the recent sharp cut in the vote for regional UNDP funds; and the change in UNDP's priorities for support. All these factors indicated that a request for continuation of the present project would attract, at best, only minor funding. The results of the mid-term review of this project coupled with knowledge of UNDP's priority area for support, made it essential to present a new project proposal if there were to be any chance of securing significant UNDP funding. Although UNDP had not officially recorded its views, it was necessary to put forward a new proposal as soon as possible for UNDP's consideration.

Mr. Kay, Head of Evaluation Section, mentioned that at the recent UNDP Governing Council Meeting it had been decided that the regional programmes would be cut by around 50% with support going into country IPF's for Africa and LDC's. He said that although there was no formal communication yet from UNDP on the priority areas for support, these could be expected to be very close to those already mentioned in the meeting. UNDP were concerned about environmental issues and favoured closer collaboration at regional and national level.

The delegate from Japan informed the meeting that his Government had made proposals at the Chiang Mai meeting for a project on environmental protection. Conservation of natural resources and energy saving projects were also being adressed in Japan.

The delegate from Australia said that a project proposal encompassing a new strategy should be formulated without delay, preferably before the next Working Group Meeting.

The delegates from India, Malaysia and the Philippines supported a new project proposal focussed on environmental control.

The delegate from India favoured introducing projects that would be supported by the successful technology introduced in the first two phases of this project. This would further strengthen the Regional co-operation.

The delegate from China suggested that new technology should be emphasized together with economic analyses and new materials.

The RCA Co-ordinator requested the meeting to consider whether they would support holding a 2nd RCA Seminar in 1991 and asked delegates to come forward with their opinions.

Twelfth RCA Working Group Meeting, Chiang Mai, March 1990

The Chairman presented the Report of the Working Group Meeting, which was accepted by the meeting with minor editorial amendments. The Project Co-ordinator announced the appointment of Mr. Joon Ha Jin as long-term expert for Tracer/NCS sub-projects. He will be stationed at the Regional Office in Jakarta.

RCA Programme 1991

The RCA Co-ordinator presented the proposed programme of activities for 1991, which was accepted without comment.

Other Business

The DDG-TC drew the meeting's attention to the "Evaluation Note" on RCA funding, which reflected the trends in funding as well as the sources of the funds.

Mr. Kay, Head of Evaluation Section, commented briefly on the Evaluation Note. RCA has relied chiefly on UNDP, TACF (IAEA Regular Budget) and extra-budgetary contributions of two donors, Australia and Japan. TACF funding has increased considerably making it necessary to review the situation and to consider non-regional donors.

The delegate from Malaysia commented that the issue of accepting funds from outside the RCA had already been decided at the previous General Conference Meeting.

The delegate from Japan said his Government was against the introduction of financial help from non-RCA sources.

The delegate from Indonesia raised the question of the accounting of "in-kind" contributions. He said that the \$8,670 recorded as the "in-kind" contribution for his country in the "Evaluation Note on the Financing of RCA" had not been an accurate reflection of the resources that had been made available.

Responding Mr. Kay, Head of Evaluation Section said that the accounting procedures that monitored and recorded the "in-kind" contributions were very conservative and only those items that complied with official audit guidelines could be recorded.

The delegate from the Philippines wished to know who would host the next Working Group Meeting after Viet Nam. His Government would be pleased to host the next Meeting.

The DDG-TC thanked the delegate from the Philippines for this gesture. If the hosting of meetings were to follow the first RCA cycle, then Japan would be the next in line, followed by the Philippines.

The delegate from Japan announced with pleasure his Government's willingness to host the 1992 meeting.

Referring to the RCA Seminar proposal the DDG-TC said that the last Seminar had been important in allowing a full review and discussion of future needs and mechanisms for achieving continued progress.

The delegate from India announced the organization of two activities at Bhabha Atomic Research Centre - A course on Research Reactor Utilization and an International Conference on Neutron Scattering in January 1991. He invited Member States to attend, although Agency support was not likely to be forthcoming. However, India could provide local hospitality to six Member States.

Summary of decisions taken by the Meeting

- 1) The RCA Annual Report 1989 was accepted without amendment.
- 2) The report of the 12th RCA Working Group Meeting, Chiang Mai, was accepted.
- 3) The RCA Programme 1991 was endorsed.
- 4) The offer by Viet Nam to host the 13th RCA Working Group Meeting, 4 to 7 March 1991 was confirmed.





Nineteenth General Conference Meeting of Representatives  
of RCA Member States, 19 September 1990

Representation

AUSTRALIA:

Dr. David Cook  
Executive Director  
Australian Nuclear Science and  
Technology Organization  
Lucas Heights  
Sydney

Dr. Garth R. Hogg  
Counsellor (Nuclear)  
Permanent Mission of Australia  
Vienna

Dr. Janice A. Henderson  
External Affairs  
Australian Nuclear Science and  
Technology Organization  
Lucas Heights  
Sydney

BANGLADESH:

Dr. M.A. Mannan  
Chairman  
Bangladesh Atomic Energy Commission  
Dhaka

CHINA:

Mr. Peng Zhaosheng  
Chief Delegate  
Alternate and Minister-Counsellor  
The Chinese Mission to the IAEA  
Vienna

Mr. Xu Naicheng  
Head of the Division of International  
Organizations  
The Office of the IAEA Affairs for  
Ministry of Energy  
Beijing

Ms. Ma Xiuzeng  
Adviser  
Permanent Mission of China  
Vienna

INDIA:

Mr. R. Chidambaram  
Director  
Bhabha Atomic Research Centre  
Bombay

INDONESIA:

Mr. Nazir Abdullah  
Deputy Director General, Applied Science  
BATAN  
Jakarta

JAPAN:

Mr. Masanori Wada  
Official  
Nuclear Energy Division  
Ministry of Foreign Affairs  
Tokyo

Mr. Tetsuya Kagami  
Special Staff  
Science and Technology Agency  
Tokyo

Dr. Sueo Machi  
Director General  
Takasaki Radiation Chemistry Research  
Establishment  
JAERI  
Takasaki

Mr. Seiichiro Takahashi  
Deputy Manager  
International Nuclear Co-operation Centre  
Japan Atomic Industrial Forum  
Tokyo

REPUBLIC OF KOREA:

Mr. Kyung-Bum Pyun  
Assistant Director  
Nuclear Safety and Co-operation Office  
Ministry of Science and Technology  
Gwacheon

Mr. Myung-Hwan Kim  
Administrator  
National Atomic Energy Research Institute  
Seoul

MALAYSIA:

Datuk Dr. Mohd. Ghazali bin Hj. Abdul Rahman  
Director General  
Nuclear Energy Unit  
Prime Minister's Department  
PUSPATI Kompleks  
Bangi, Selangor

Mr. Raja Abdul Aziz bin Raja Adnan  
Officer in the Planning Unit  
Nuclear Energy Unit  
Prime Minister's Department  
PUSPATI Kompleks  
Bangi, Selangor

PAKISTAN:

Dr. Mukhatar Ahmad  
Counsellor, Scientific Affairs  
Embassy of Pakistan  
Paris

PHILIPPINES:

Dr. Carlito Aleta  
Officer-in-Charge  
Philippine Nuclear Research Institute  
Quezon City

THAILAND:

Dr. Suchat Mongkolphantha  
Secretary-General  
Office of Atomic Energy for Peace  
Ministry of Science, Technology and Energy  
Bangkok

Mr. Apichai Chvajarernpun  
Office of Atomic Energy for Peace  
Ministry of Science, Technology and Energy  
Bangkok

VIET NAM:

Professor Nguyen Dinh Tu  
Chairman  
National Atomic Energy Commission  
Hanoi

Mr. Nguyen Tien Nguyen  
Director  
Department of International  
Co-operation and Planning,  
National Atomic Energy Commission  
Hanoi



Nineteenth General Conference Meeting  
of Representatives of RCA Member States

Opening Remarks

Noramly bin Muslim

Deputy Director General

Head, Department of Technical Co-operation

Distinguished Delegates, Ladies and Gentlemen!

On behalf of the Director General it gives me great pleasure to welcome you to the Nineteenth Annual General Conference Meeting of the Representatives of RCA Member States. It is a great pleasure for me to meet with those delegates who are here for the first time as well as those old friends and colleagues who have served RCA so well over the past years.

Since the last General Conference Meeting we have had the RCA Working Group Meeting in Chiang Mai in March. This, the 12th RCA Working Group Meeting was officially opened by H.E. Prachaub Chaiyasan, Minister of Science, Technology and Energy. He said Thailand's development in their nuclear science and technology had been greatly assisted by regional and international co-operation projects. In his keynote address he reviewed briefly the history of OAEF and went on to mention the future prospects for the organisation with its proposed shift to a new site. Issues of the public acceptance of nuclear technology and power generation needs of a rapidly expanding Thai economy were also presented.

The Working Group Meeting was skillfully chaired by Mr. Suchat Mongkolphantha. The project was full reviewed and is summarised in the report before you.

The RCA Annual report and the report of the RCA Working Group Meeting have been distributed to you and I look forward to hearing your comments.

At the time of writing the report, it appeared as though the RCA Programme was going to maintain its level and distribution funding but recent indications are such, that we should prepare ourselves for a possible contraction in the level of budgetary funding coming from existing sources. This does mean that we should anticipate supplementing a reduced RCA budget with funding from other sources. I am certain that the multiplicity of talents around us, will be used to effect in identifying and hopefully securing new donations. We are fortunate to have Japan, Australia, China, India, the Republic of Korea, Asian Development Bank and UNDP as donors and we would like to encourage others to follow their lead to further reinforce the spirit of Regional Co-operation that has been the hallmark of this regional programme.

I would now like to raise a few points for your consideration. We have to focus on the future of RCA and intertwined with this is the need to prepare proposals to go to UNDP for support for activities in the Fifth Programming Cycle for 1992-1996.

The UNDP Mid-term Evaluation Review carried out earlier this year, raised a number of issues for consideration and since then there have been a number of other signals that have indicated the need for some modifications to occur within parts of the RCA programme. Whether we like it or not, like many things around us now, RCA maybe entering a period of change. Conditions are changing and we may have to reexamine some of our aims and objectives in the light of these new circumstances. I would like to outline a few of the factors at work.

We can all be proud of the distinct Regional character of the RCA. Although we have diversity in language, religion, culture, exposure to industrialization, etc. we have been able to clearly demonstrate a strength of purpose and resolve to make RCA work, putting aside political postures and concentrating on the need for co-operation and collaboration. Our success has been the model for others. However, we cannot sit back and ignore some important features of our portion of the world.

It is quite clear that the rapid economic and industrial development that has occurred in Asia has not been uniform throughout the region; infact this polarisation is increasing rather than decreasing. The needs of the region are widening, with some countries requiring basic assistance to address their immediate needs while others wish to focus on more sophisticated technologies. It is encouraging to see some of our RCA Member States providing resources to help bridge the differences

between the developing and the industrialised countries. It is also gratifying to see developing countries within the region continuing with the long tradition of Asian co-operation. This year 7 of the 38 regional training events will be funded by them. It is hoped that such assistance will expand and also that the number of developing country donors will increase. Technical Co-operation between Developing Countries (TCDC) is one of the cornerstones of the RCA and a practical demonstration of the resolve of the region to take positive action to address its problems with its own resources. However, it is unlikely that these actions alone will be sufficient to address the problems of the least developed countries in the Asian region and consideration should be given as to whether some sub-regional initiatives are required.

Within the Region much use is made to the institutes of high standing and these supplement the Agency's technical resources. Special relationships have evolved between these bodies and some 60 per cent of the RCA projects. Increasing use is made of regional experts. These are all positive indicators of the health of the nuclear technology at the institute level but what is not clear is what is the status of the technology at the user level. For example, are the developments and applications in industry sustainable. What is being done at the project level to ensure that there are prospects for the long-term benefits to flow from the newly introduced technologies?

In the future we may well have to look much more critically at the projects to determine which will produce the best investment for our limit available financial resources. You will have received the Evaluation Note on the Financial of the RCA. It is an important document which clearly shows the funding sources and how the relative and absolute amounts have altered over the past 10 years. It also shows the vulnerability of the projects to significant changes in extra-budgetary and UNDP funding. You will doubtless have comments to make on the content of this report. What is needed to be focussed on, is the future of RCA should there be major cuts in funding. It is quite clear that neither the Regular Budget nor the TACF could fill the gap. We are then left with options of reducing the programmes, if no alternative regional donors can be made good the deficits. If such a scenario were to occur, there is of course one further option, one which has been rejected previously, and that is to accept extra-budgetary support from outside the region. We should perhaps closely examine whether the viability of programmes should hinge on the dogma of only accepting regional donors. If the principle of regional donation is of fundamental importance, then are all RCA members going to take over the financial responsibilities by either becoming donors or increasing their contributions?

I hope that these few thoughts will prepare us mentally for anything the future can bring and will generate discussion and stimulate an examination of where we are and what we are doing within our changing environment. Before leaving these weighty matters, one item and vital to the health of RCA needs to be reemphasised. Within RCA it is essential that we have free movement of people to attend the various regional functions. Would you please ensure that your Governments are cognisant that all assistance should be extended to enable visas to be granted as expeditiously as possible.

Before concluding I would like to pay tribute to the past RCA Co-ordinator, Dr. Peter Airey who has returned to Australia after 4 years. I am sure the Meeting would wish to extend to him its gratitude for his painstaking efforts for RCA.

In conclusion may I urge you to look to the future. I look forward to hearing your views this morning. Once again welcome to you all and let us continue to maintain RCA as a model that others chose to emulate.

Nineteenth General Conference Meeting of  
Representatives of RCA Member States

10:00h Wednesday, 19 September 1990  
Conference Room V, C07, IAEA Headquarters

Agenda

1. Opening

- . Remarks by interim chairman
- . Welcome on behalf of the IAEA
- . Election of chairman
- . Statement by chairman elect
- . Adoption of agenda

2. Report by RCA Co-ordinator

3. RCA Annual Report 1989.

The Meeting is invited to accept the report as tabled or with any agreed amendments. The report was circulated separately.

4. Twelfth RCA Working Group Meeting, Chiang Mai, March 1990.

The Meeting is invited to accept the report as presented or with any agreed amendments.

5. RCA Programme 1991.

The Meeting is invited to endorse the 1991 RCA programme.

6. Other Business.

September 1990



STATEMENT BY MR. SUCHAT MONGKOLPHANTHA  
CHAIRMAN OF THE NINETEENTH RCA GENERAL CONFERENCE MEETING  
SEPTEMBER 19TH, 1990

Dr. Noramly, Deputy Director General of IAEA,  
Dr. David Cook, Executive Director of ANSTO, the interim  
Chairman,  
Distinguished Delegates,  
Ladies and Gentlemen,

It is a distinct honour and privilege for me to serve as the chairman of this important conference. First of all, I wish to thank the Vietnamese delegates for nominating me for the election as well as all delegates for the strong support. I also wish to thank Dr. Noramly and Dr. Cook for their warm words of welcome and at the same time, I would like to request for valuable contribution from all delegates to achieve the meeting goals.

Last week I received, through Dr. Noramly, the letter of greetings and appreciation from Prof. Hammad, Chairman of the First AFRA Technical Working Group, on behalf of the whole assembly, the response to the message of best wishes and congratulations on the occasion of the First Meeting of the AFRA Working Group which I sent him, on behalf of the participants of the Twelfth RCA Working Group Meeting. I would then like to convey his greetings and appreciation to all of you as well.

Distinguished Delegates,

It is a great pleasure to learn that we are going to complete the initial period, the second phase of the Regional Co-operative Agreement next year and to continue its third phase in the year after. This is, therefore, a time to reflect on the achievements of the activities undertaken over the years. In this connection, your attention is drawn to the RCA Annual Report of 1989 distributed for your review and acceptance. Also, your attention is drawn to consider and endorse the RCA programme in 1990 to strengthen further RCA activities so that the projects have been carried into our mutual satisfaction and to bring benefits to the people of the Member States and the Region as a whole.

Distinguished Delegates.

Among the significant RCA activities is the Twelfth RCA Working Group Meeting hosted by the Royal Thai Government, through the Office of Atomic Energy for Peace, on 19 to 22 March this year, in Chiang Mai, the North of Thailand. There were delegations from 11 member countries including IAEA and UNDP representatives participated in and provided remarkable and fruitful contributions to the meeting. The meeting was successfully carried out. The exchange of creative views on a number of issues took place and has much affected the programme an development of RCA activities.

Distinguished Delegates,

I have the honour to refer to the NCS coal equipment provided to Thailand under the Project which has been installed at the Lignite Mine of the Electrical Generating Authority of Thailand, in Mae Moh, Lampang, for regional training and demonstration activities. The equipment and the activities were funded by extra-budgetary contribution from the Government of Australia and on behalf of the Royal Thai Government, I wish to express, once again, our grateful thanks to the Government of Australia for their kindness. During the Twelfth RCA Working Group Meeting, the delegates were also arranged to visit this NCS coal equipment and extremely impressed with it.

Distinguished Delegates,

We have much important task ahead of us to be finished in about two hours only and I shall not take any more of your valuable time. Before I go any further, I would like to request for your kind co-operation not to present the country statement, or should you really want to, please make it shortly.



19th General Conference Meeting of Representative  
of RCA Member States

Comments by RCA Co-ordinator

Mr. Chairman, Distinguished Delegates, Ladies and Gentlemen!

I am pleased to have the opportunity to report on some of the things that have happened since the last General Conference Meeting. There is much detail about the RCA project in the 1989 Annual Report and in the report of the Twelfth Working Group Meeting which was held in Chiang Mai in March this year. Both these documents were issued to you before the meeting and I do not propose to reiterate their contents. I will however raise some aspects which in one way or another seem to merit attention.

(1) As indicated by Professor Noramly in his opening address, the future funding of RCA must be considered in regards to both the breadth of activities that the member states want to have covered and in the depth of support that can be provided for each individual topic. This will be especially urgent should there be a marked reduction in extra-budgetary funding.

The matter of funding for RCA has been reviewed recently. You have an "Evaluation Note" in the package of material supplied to you. In it, the collation of this financial information over the period 1979-89 is most valuable, since it allows us to readily observe the trends in funding as well as the sources. In the observations at the end of the document, three points made are:

- . RCA financial relies principally on the support of UNDP, the Agency and extra-budgetary and in-kind support of two donors, Australia and Japan.
- . TACF funds have gained in importance in 3 of the last 4 years.
- . Outside of the industrial field, RCA could not have operated without substantial TACF and Regular Budget support.

I would be very interested to hear comments from the distinguished delegates on their response to this document.

As reported by the RCA Co-ordinator in the Chiang Mai Working Group Meeting, extra-budgetary support from the five donor countries, Australia, Japan, China, India and the Republic of Korea was some 54.66 of the RCA budget, while UNDP provided an additional 20.1%. At the Tripartite Review Meeting in Kuala Lumpur in June this year, it was signalled informally that UNDP funding would be reduced - perhaps by 50% - for an extension of the UNDP Industrial Project for the year 1992 to 1996. However when Dr. Kay, Head of Evaluation Section, visited UNDP in New York in July there were indications that the situation could be much worse. The funds for the Asian Regional Programme for the cycle to begin in 1992 are to be cut by half. Consideration was

apparently also being given to segmentation of the Asian programme into subregional components to create stronger bonds between regional activities and national projects. No official correspondence on this has yet been received from UNDP, neither has there been the issue of a document discussing the development status and related issues in the Asia and Pacific region foreshadowed by the RCA Co-ordinator at Chiang Mai. Both at the Chiang Mai Working Group Meeting and at the Tripartite Review Meeting, it was quite clear that the RCA members have given strong support to a continuation of the Regional Industrial Project. Support for initiatives in the fields of agriculture and medicine have been raised, specifically:

- . in the field of agriculture, support for a programme to strengthen research on Animal Production and disease diagnosis and on nitrogen fixing trees for increasing soil fertility crop and fuelwood production.
  
- . in the field medicine, support for a programme to address the enormous hepatitis problem.

As was stated at the Working Group Meeting, not all areas could be supported and priorities need to be established with the help of guidance from the RCA Member States. At that time, the focus of the UNDP Co-ordinator's work on the future programme of funding from UNDP for 1992-1996 was to obtain financial support for a continuation of the project to a third

phase and he had prepared some draft project frameworks based on feedback from the various National Co-ordinator meetings. What is now clear from informal contact with UNDP is that a request for a continuation of the project is unlikely to receive UNDP funding. It will therefore be necessary to terminate the Industrial project at the end of 1991 and put a fresh proposal to UNDP for support for the period 1992 on. This new proposal will have to be carefully formulated to fit in with the new objectives of UNDP which unfortunately have not yet been committed to paper. We can infer some of the constraints from the recommendations of the UNDP Mid-Term Evaluation Review which suggested that future activities should place emphasis on:

- . the need for assistance to small and medium-size industries;
- . the need to address environmental problems;
- . the need to improve transportation infrastructure; and
- . the need to address the problem of public acceptance.

I propose that a group of Regional Experts together with the relevant Agency Technical Officers and staff will meet later this year to prepare a programme that will fit into the criteria set by UNDP and will be presented so that it will dovetail in with the present programme so that we do not lose the present momentum.

(2) Running parallel with the issue of UNDP funding is the issue of extra-budgetary funding. At present there are no indications that either singly or together Australia or Japan would be making good any short fall in funding occasioned by the reduction of UNDP funding. As Professor Noramly made clear in his speech, there are not many alternatives available, either the RCA activities contract or financial support is found from elsewhere. If we stay within the region, as has been requested on past occasions, the only other option is for more regional donors to come forward. Could we get five countries to contribute US\$200,000 each? If this is not possible, we have to reconsider how fundamental is the need for refusing extra-budgetary money from outside the region. Again your opinion will be important in guiding us on what options are possible.

(3) The current RCA Agreement is due to expire on 11 June 1992. The Member States should now have advised the Agency of any amendments to the current agreement. It will be necessary for the matters to be considered by the Legal Division and can then be circulated for detailed discussion at the 13th RCA Working Group Meeting to be held in Ho Chi Minh City next year. Hopefully any amendment can then be endorsed at the 1991 RCA General Conference Meeting and approved by the Board.

(4) In the area of new project proposals some actions were to be followed up for this meeting. Your experts were asked to evaluate the following proposals:

- . Regional Programme to Strengthen Research on Animal Reproduction and Disease Diagnosis in Asia through application of Immunoassay Techniques.
- . Regional Asian Project on Nitrogen Fixing Trees for Increasing Soil Fertility, Crop and Fuel Wood Production;
- . New Project Proposal on the Use of Nuclear Techniques to Improve Forest Tree Species, Kyungpook National University, Republic of Korea; and
- . Applications of RFLP Technology in Fundamental Genetics and Breeding Programmes in Crops, Agricultural Sciences Institute, Rural Development Administration, Republic of Korea.

At the Working Group Meeting in Chiang Mai there were 3 other projects mentioned and would be considered if there were a sufficient level of support. These were:

- . Integrated Control of Tropical Plants Viruses with Nuclear Techniques;
- . The use of radiation technologies to address pollution problems (flue gas and sewage); and
- . the control and eradication of termites.

Your comments on the need for and the value of these projects would greatly assist those proposing them, especially where extra-budgetary support might also be involved.

(5) The fifth point was the possibility of organising an RCA seminar in 1991. Again at the Chiang Mai Working Group Meeting delegates were asked to refer this question to this meeting.

Before finishing I would like to inform delegates that at the recent NPT Conference in Geneva, Malaysia presented a paper on behalf of RCA to Main Committee 3.

I apologise for the late circulation of some of the documentation. As you know I only took up this position at the beginning of this month and the 6 month gap between Dr. Airey leaving and me arriving did not aid the efficient running of the project.

I look forward with great interest to hear your comments on the issues Professor Noramly and I have raised. I am certain this will be a most use time for us and aid us in developing RCA.

Thank you.



COUNTRY STATEMENT OF CHINA TO THE 19TH RCA

GENERAL CONFERENCE MEETING

19 SEPTEMBER 1990

Mr. Chairman,

I have great pleasure to participate in the 19th Annual Meeting of Representatives of RCA Member States and on behalf of the Chinese delegation, I join others to congratulate you on the election as the Chairman of the meeting.

It has been demonstrated that RCA is a successful international co-operation instrument and has accelerated the peaceful use of nuclear energy and brought about a great advance in the economic and technical development in the region. The role of RCA has been fully recognized by all member states and cannot be too emphasized. China has continued to involve itself in the RCA activities and will give further impetus to the regional co-operation.

China supports the overall assessment for the UNDP/IAEA/RCA industrial project of Phase II and the recommendation on the future work made by the mid-term evaluation mission and also strongly supports the extension of the project to Phase III. We agree with the Draft Project Formulation Framework of Phase III in general and would like to stress the importance of skillful handling on the relation between transfer of matured technologies and introduction of new and emerging technologies in order to meet the different needs of different countries in the region.

In order to enhance the application of nuclear techniques and speed up the transfer of technology to end users, analysis on economic benefits and public understanding on safety are important issues. Systematic economic evaluation and comparison between nuclear and non-nuclear techniques is needed when radiation application is introduced to new areas, such as in medicine, bio-technology and environmental protection. Improvement on safety and economic benefit of radiation facilities deserves strengthening.

Nucleonic control system are widely used in paper industry, steel industry and other industries in China. The advantages of NCS application should be further publicized through regional or national activities.

With reference to the maintenance of nuclear instrumentation, problems exist in this region. Project in this field should be initiated and guided to strengthen regional co-operation in instrument operation, preventive maintenance and repair and provision of servicing and spare parts.

Also, China attaches great importance to the project of Research Reactor Utilization and hopes the project could be carried out with an increased emphasis in the RCA. We are pleased to see some activities were held in 1989 and 1990. A regional workshop on Technology and Utilization of Low Power Research Reactor funded by China is to be held in Beijing in coming November. China will continue to share our expertise and

facilities with our RCA Member States and is prepared to host more activities in various areas, for example, in neutron transmutation doping, isotope production, safe operation and so on.

In the meantime, China would like to point out the importance of the project of energy and nuclear power planning. In Asia-Pacific region, there are a number of member states operating or constructing nuclear power plants and several more member states are considering the role of nuclear power in national energy system. At present time, the global climate change and environmental pollution caused by fossil fired power plants are concerned by the whole world. Therefore, we wish the RCA programme could give priority to the project on energy and nuclear power.

Mr. Chairman, the past experience has shown the role of TCDC in the region. We believe TCDC will be further brought into full play in RCA framework. On this occasion, I wish to assure you that China will continue to do its best to make financial and technical support to RCA in order to promote the development and prosperity of the region.

Thank you.



COUNTRY STATEMENT OF INDONESIAN DELEGATION

NINETEENTH GENERAL CONFERENCE MEETING OF

REPRESENTATIVES OF RCA MEMBER STATES

19 SEPTEMBER 1990

Mr. Chairman,

Indonesia has been associated with the Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology from its beginning since 1972. It is undoubtful, that RCA as the most useful vehicle for nuclear technical co-operation in Asia and the Pacific Region has proven of its successful existance which has achieved its tangible and remarkable progress.

Indonesia is actively participating in almost all of the RCA programmes and has benefited from them either through participation in different training courses as well as in regional seminars and research co-ordinated activities.

In regard with the UNDP/IAEA Industrial Project which currently running the second phase of its activities has given much progress in Indonesia. A number of seminars, training courses, and demonstration have been conducted. There are growing awareneses from the local industries on the benefit of isotope and radiation technology and even in certain industries this technology has been implemented already. The direct commitment of the Government of Indonesia to the Project itself is that BATAN (the National Atomic Energy Agency) will

continuously support the programme of the Project by active participation in all programme of the Project and will be very pleased to continue to be host of the Project Co-ordinator's Office at the Centre for the Application of Isotopes and Radiation at Pasar Jumat, Jakarta.

In view of the implementation and achievement of the Project, the Government of Indonesia observed that the past and the on-going activities are in accordance with the existing work plan and have been implemented satisfactorily.

It is undoubtful that the existing UNDP/IAEA Industrial Project will encourage the programme in the country. Indonesia has gained tremendous advantages from the project through its active participation. And therefore we strongly support the extension of the project into Phase III.

The programme of Phase III project should be focussed more on the economic rather than on the technical aspect, which prove a competitiveness to the existing conventional methods. The programme should be emphasized on through and in-depth market study which will enable the industries for its implementation.

Mr. Chairman,

Recommendation made by the Mid-term Evaluation Mission should be taken into consideration in the formulation of the future programme. One of the interesting recommendation is that

the assistance to small and medium size industries should gain the improvement of the quantity as well as the quality of product, as in general small and medium size industries have limited capital and lack of skilled personnel.

In principle my delegation is in favour to endorse the RCA Annual Report 1989, the 12th RCA Working Group Meeting, Chiang Mai, March 1990, and the RCA Programme 1991, as a whole.

My delegation supports the new projects contained in the document and will participate in all programmes.

In regard with the "Evaluation Note" concerning the financial of RCA, my delegation would like to give its comments as follows:

1. With the hope that contribution budget provided by UNDP to support the RCA programme activities could be gradually increased in the years to come;
2. The extra-budget funding by donor countries of RCA, especially Australia and Japan, would be continued and be increased;
3. We are pleased to learn that "in-kind" contribution provided by member countries of the RCA is contained in the Evaluation Note, e.g. an amount of US\$8,670 is

derived from my country during a ten years period from 1979-1989. My delegation is rather surprised looking at the figure how the Secretariat of the IAEA has formulated and come out with that figure. If we look at the document of the Project for Phase II only that Indonesia has committed to contribute in-kind of about US\$439,500 during the phase II period. From the other point of view there are still other in-kind contribution made by Indonesia which are not yet included in the above figure.

My delegation is confident that same situation will be also found with the other member countries of RCA.

Thank you Mr. Chairman!

JAPANESE COUNTRY STATEMENT  
ON THE OCCASION OF THE 19TH ANNUAL MEETING  
ON THE REPRESENTATIVES OF RCA MEMBER STATES

Mr. Chairman,

Before I start my statement on behalf of the Japanese Government, I would first of all like to congratulate you on your election as Chairman of this 19th Annual Meeting of the Representatives of RCA Member States. Having you here as Chairman, I feel assured that this Annual Meeting will surely add one more distinguished page to the history book of RCA co-operation.

I would also like to congratulate Dr. John Easey on your appointment as RCA Co-ordinator, and would like to welcome you warmly to this Annual Meeting where you officially come out. I am delighted to assure you, on behalf of the Japanese Government, that we are willing to extend to you our utmost co-operation as much as we did to your predecessor.

Mr. Chairman,

Ladies and Gentlemen.

The importance of international co-operation in the field of peaceful uses of nuclear technology is indeed, as representatives here would recall, what our government has always reiterated when occasions allowed. We regard the RCA a very servicable architecture for this purpose. The Japanese

Government will therefore put priority to continue as much as possible to extend our contribution on the RCA activities in the Asian and Pacific region.

When we come to think about further development of RCA co-operation, I presume we would most probably agree that the successful co-operation depends on, on one part, the way we pick up promising projects, and, on the other, the way self-help spirit among member countries shows. Of course in between we must see to it that smooth and excellent communication should be encouraged among donor countries, IAEA, and recipient countries.

Seeing all that, the Japanese Government will continue to offer as much contribution as it could do, with special emphasis as ever on properly familiarising experts with nuclear technology with a view to seeing those countries in the region further prosper.

Mr. Chairman,

I would now like to turn to the individual activities of the RCA which we have recently supported.

First is the Phase II of Industrial Applications. We appreciate the way the Phase II as a whole steadily progressed, and we would continue to support the programmes as possible as ever in sub-projects on Non-Destructive Testing. Radiation

Processing, and Nucleonic Control System. As we have pointed out on several occasions of the past RCA meetings the importance of practical uses of nuclear energy in view of national development in each member state, more should be done to transfer the fruits of R and D to industries of the member states. It might be an idea to hold a meeting in the future so as to seek possibilities in this regard.

Second is Medical and Biological Applications. In this area too we would extend our support in succession as possible as before in sub-projects on Imaging Procedures for the Diagnosis of Liver Diseases, Improvement of Cancer Therapy, and Compilation of Anatomical, Physiological, and Metabolic Characteristics for a Reference Asian Man.

We would thirdly continue to offer our support to Strengthening of Radiation Protection Infrastructure as possible as before.

Mr. Chairman.

I would now move on to the Draft Project Formulation Framework for Phase III of Industrial Application. We have already submitted our detailed comments on it to the UNDP Project Office in Jakarta, therefore today I would just touch upon the possible Japanese support to it.

Against our domestic background of financial difficulties, positive efforts would surely be made, one the year-by-year basis, to secure at least the current standard of Japanese financial contribution yearly extended to this Project. However I need to stress no financial commitment could be made or assumed at this stage.

With regard to Radioisotope Techniques (RTC), which would be Sub-project 1 of the 3rd Phase Industrial Applications, our co-operation would possibly be extended to major element 2, the content of which is equivalent to the current NCS. It should be noted, although there is no mention of us in the Draft as a potential financier, we are interested in financially contributing to the NCS during the next phase as we have done during the 2nd.

As for Sub-project 2, Non-Destructive Testing (NDT), we would conceivably extend our co-operation to cover all the five major elements, with emphasis on developing local certification of NDT personnel (Major Element 2) and harmonising regionally practiced schemes (Major Element 3).

With respect to Radiation Technology (RTG), Sub-Project 3, we would possibly offer our co-operation to establishing local capacity for manufacturing medical product by sterilisation technology (Major Element 1), introducing new technology for manufacturing medical product (Major Element 2), preservation of

environment (Major Element 3), radiation vulcanisation of natural rubber latex (Major Element 4), and building infrastructure for fundamental and applied radiation technology (Major Element 5), with highlights on Major Elements 3, 4, and 5. It would still be safe in our opinion, to repeat again on this occasion that commencement of Major Element 3 entirely depends on successfully sorting out financial sources for which we are making an utmost effort, and that at this juncture no commitment is yet made.

With reference to Radiation Safety (RST), Sub-Project 4, we presume it would have better chances to see more desirable results, if its targets are divided into bits which are then, according to its nature, integrated with RTC, NDT, or RTG respectively.

In regard also to Maintenance of Nuclear Instrumentation (MNI), Sub-project 5, we see that it would produce effective out-puts when it is absorbed by activities of RTS where levelling-up the ability on engineering would be pursued.

Mr. Chairman,

Finally I take this opportunity with pleasure to announce our willingness to host in Japan the fourteenth RCA Working Group Meeting. We are very much looking forward to seeing you all there.

Thank you.



COUNTRY STATEMENT - MALAYSIA  
NINETEENTH GENERAL CONFERENCE MEETING OF  
REPRESENTATIVES OF RCA MEMBER STATES  
19 SEPTEMBER 1990

Introduction

The Malaysian delegation conveys its appreciation to Dr. Peter Airey on a job well done. Dr. Airey has contributed to the smooth running of the RCA. The effort put forth has left a positive mark. His successor, Dr. John Easey will no doubt carry out this tradition. My delegation would like to extend our hands in welcoming him. Malaysia will continue to support and will actively participate in all RCA/IAEA/UNDP programmes.

The Nuclear Energy Unit (NEU) in the Prime Minister's Department undertakes programmes with the view to encourage the involvement of industry particularly in the utilization of radioisotopes and radiation technology. The use of nuclear technology in industry in Malaysia has increased significantly in such areas as non-destructive testing, radiometry etc. which are essential components in industrial fabrication and maintenance programmes.

The Unit has upgraded its Cobalt-60 radiation facility to 337 kCi from 200 kCi thereby doubling its medical products sterilization services. Research capabilities are also enhanced, particularly in the area of radiation processing. The installation of an electron beam machines (EBM) later this year

will add to the already available facilities. The Unit fully supports the role played by RCA promoting and boosting the utilization of radioisotopes and radiation technology in Malaysia.

Activities carried out during 1989-1990 are as follows:

- a) RCA Programme on Industrial Application of Isotopes and Radiation Technology

1. Tracer Technology

Malaysia managed to produce a group of nuclear scientists who are familiar with the general requirements pertaining to tracer/sealed source of radioisotopes for investigation as well as for planning and executing tracer/sealed source research work.

Malaysia hosted the 4th Regional Training Demonstration on the Use of Tracer Technology in Industry from the 9th to the 27th of October 1989. Efforts are being made to further promote the applications of the technique in industry baring on the positive response. The Unit responded by initiating of a promotional programme that emphasises on site demonstration. Presently, there are a number of companies utilising these facilities as well as expertise especially in trouble shooting and in environmental studies.

2. Non-Destructive Testing

This project, which received full support under the RCA/UNDP/IAEA, played a major role in upgrading the quality of NDT in the country. Under the auspices of the National Qualification and Certification Scheme (NQCS), four National Trade Standards for NDT personnel have been approved and implemented, the last being the standards for liquid Penetrant Tester which was approved in 1989. Another standard for eddy current tester which is mainly used in the aviation industry and already bound by the International Regulation will be realised in 1991.

Since the implementation of the NQCS, a total of 24 training courses have been conducted in accordance with the National Trade Standard and supported by the IAEA/RCA/UNDP in the form of experts/lecturers.

A total of 411 participants from a broad spectrum of NDT activities have qualified and have been certified. Qualified personnel have been and will be accepted by the local industries. Those accepted have performed with a reasonably high level of competency.

The size of current NDT activities and the expected demand in the future prompts the government to establish a National NDT Centre of Excellence. The Centre is to be fully operational by the end of the Sixth Malaysian Plan (1991-1996) This will ensure the improvement, control and monitoring of the quality of local industries products. Nine training courses will be held this year at the Nuclear Energy Unit.

Recently, the Malaysian Society of Non-destructive Testing was founded. The response from the various parties such as servicing companies, users and the government sector is very encouraging. This will, hopefully enhance the standard of professionalism of NDT in the country.

### 3. Radiation Technology

Research in the area of radiation vulcanization of natural rubber latex (RVNRL) is being actively undertaken. A national research group comprising of researchers from the Rubber Research Institute of Malaysia (RRIM), the National University of Malaysia (UKM) and the Nuclear Energy Unit (NEU) has been formed. Initiatives to formulate regional co-operation on the subject will be an added advantage. NEU organised a seminar on radiation processing of polymer in 1989 and held a national seminar on RVNRL in August this year.

Since the commissioning of gamma irradiator in early 1989, more than 1000 cubic meters of medical products such as surgical and examination gloves and containers for eye solution (manufactured by 9 different companies) have been sterilized using the facility. Expansion program for sterilization of medical products is being planned in anticipation of the installation of an electron beam machine (EBM) in the Unit. The Unit helped to organised the RCA/UNDP Regional Workshop on Regulation in Industrial Sterilization from the 28th to 30th June 1990.

Radiation cross linking in plastic is one of the technologies which is now being given serious consideration and attention by the Unit in view of the polyethylene and polypropylene production planned for 1992 and 1994 respectively by the Malaysian Petroleum Authority. Interest shown by some companies in the wire and cable insulation, prompts us to formulate research programmes in this particular area.

#### 4. Nucleonic Control System in Industry

The application of Nucleonic Control System in Industry is still at an early stage. However, through the promotional programme conducted at the Nuclear Energy Unit in Co-operation with the IAEA under the RCA/UNDP Industrial Application project and to some extent due to the economic recovery, the number of NCS and nucleonic instruments being applied in the country is on the increase. Five nucleonic

control systems have been implemented in the paper and pulp industry. Six more systems, one of which is a density gauge, were also implemented in the mineral industry Nuclear gauge for measuring density and moisture content of soil and soil aggregates have been used by the government agencies and civil engineering companies.

B) Other activities

1. Care and Maintenance of Nuclear Medicine Instrument,
2. Nuclear Techniques for Toxic Element in Foodstuff,
3. Research Reactor Utilization,
4. Radioimmunoassay of Thyroid Related Harmones,
5. Food Irradiation Process Central and Acceptance,
6. Increasing the Yield of Nitrogen Fixation Capabilities of Common Grain Legumes,
7. Marine Contaminant and Sediment Transport,
8. Strengthening of Radiation Protection,
9. Compilation of Anatomical, Physiological and Metabolic Characteristics of Reference Asian Man,
10. Introduction of Computerized Dosimetry and data-base in Radiotherapy of Carcinoma of the Cervix in Asian and Pacific (Research Control related to RCA project), and
11. Use of Computer in Tc-99m Imaging.

C) New Proposal Project

Malaysia supports the project on the Control of Tropical Plant Viruses in the Asia and Pacific Region using nuclear techniques.

D) Financial of RCA Projects

Malaysia requests that RCA continues its endeavour to apply for UNDP fundings for on-going and future projects within the framework of the RCA.

Malaysia reminds the Meeting of the decision taken in Chiang Mai, Thailand, 1990.



PHILIPPINE STATEMENT

19TH GENERAL CONFERENCE MEETING OF RCA MEMBER STATES

19 SEPTEMBER 1990

VIENNA, AUSTRIA

Mr. Chairman, Distinguished Delegates:

It is my great pleasure to have this first opportunity to attend the General Conference Meeting of Representatives of RCA Member States. Allow me to congratulate you on your election as Chairman of this meeting. We would also like to congratulate Mr. John Easey on his appointment as RCA Co-ordinator. We would also like to make note of the excellent work of his predecessor, Mr. Peter Airey.

The Philippines has been associated with the RCA activities from its beginning. In its 18 years of existence the RCA has achieved remarkable progress and tangible contribution to the promotion of the utilization of nuclear energy in the member states. Now looking forward to another renewal of the agreement, the Philippines reaffirms its support to the RCA and for its continued existence.

Philippine participation in the RCA is active in projects. The Regional UNDP project is particularly supportive of the Philippine thrust to become an NIC by the year 2000. Although recent international and local events could serve to delay attainment of our objective we are hopeful that we will still not fall short of it.

The project has played a key role in catalyzing Philippine efforts to standardize non-destructive testing activities in the country. The organization of a national certifying body (NCB) and the presence of an active local NDT Society as well as the establishment of a national certificate scheme augurs for sustained development in this area.

We urge full support to the RCA project on strengthening radiation protection infrastructure. The programme on the intercomparison of personnel and environmental dosimetry enables the participating countries in the region to compare results and validate the accuracy of their film badge dosimetry procedures using conditions/parameters common to the countries. The programme should be extended and expanded to include other dosimeters and measuring techniques. Finally, environmental monitoring detectors should also be intercompared to ensure reliability of results and comparability of analysis.

The setting up of a co-ordinated research programme in the QA/QC of nuclear medicine instruments is being brought for consideration as a future activity of the RCA. It is believed that this programme will provide an indirect evaluation of radiation safety programmes in medical/nuclear medicine centers. This is particularly important in developing countries where medical physics service are not always available.

The spirit of regional co-operation will be given more substance if more efforts are exerted towards the utilization of more expert services from the region. The drawing up of a more comprehensive listing of experts in the various fields of nuclear techniques application should be given attention. While not denigrating on experts from the other regions, the common conditionalities existing among countries in the region and the economic aspect of recruiting experts from the region where regional experts are available, are important considerations.

Finally, we would like to take this opportunity to reiterate our offer to host an RCA Working Group Meeting, possibly in 1992.

Thank you, Mr. Chairman.

(Attached to this is the country statement during the last working group meeting, for an enumeration and background information on the projects where the Philippines is a participant).



COUNTRY STATEMENT OF THE PHILIPPINES

12th Working Group Meeting of RCA Member States

Chiang Mai, Thailand March 19-22, 1990

PROJECT PARTICIPATION

The Philippines as a signatory to the RCA Agreement is participating in the following activities:

1. Regional UNDP Industrial Project

- 1.1 Tracer Technology in Industry
- 1.2 Nucleonic Control Systems
- 1.3 Non-Destructive Testing
- 1.4 Radiation Technology

2. Medical and Biological Applications

- 2.1 Use of Computers in Tc-99m Imaging
- 2.2 Radioimmunoassay of Thyroid Related Hormones
- 2.3 Inhalation Imaging for Diagnosis of Respiratory

Diseases

- 2.4 Development of Radiation Protection Infrastructure
- 2.5 Compilation of Anatomical, Metabolic and Physiological Characteristics of Reference Asian Man
- 2.6 Radiation Sterilization of Tissue Grafts
- 2.7 Care and Maintenance of Nuclear Medicine Instruments
- 2.8 Imaging Procedures for Diagnosis of Liver Diseases (Phase II).

3. Agricultural Projects

3.1 Nuclear Techniques to Improve Domestic Buffalo Production (terminated in 1989)

3.2 Asian Regional Co-operative Project on Food Irradiation (RPFI Phase III)

4. Research Reactor and Energy-Based Projects

4.1 Research Reactor-based Projects

4.1.1 Research Reactor Utilization

4.1.2 Basic Science Using Research Reactor

4.2 Energy-based Projects

4.2.1 Energy and Nuclear Power Planning

STATUS OF PROJECTS

1. Regional UNDP Industrial Project

1.1 Tracer Technology in Industry

The Third National Co-ordinators' Meeting (Tracers and Nucleonic Control Systems) was held at the Baguio Country Club, Baguio City, Philippines on 19-20 February 1990. Ten National Co-ordinators (NCs) from developing countries, 2 NCs from

developed or donor countries, 1 expert from Australia and the Project Co-ordinator attended the meeting. Work plans for 1990 and 1991 for Tracer Technology and Nucleonic Control Systems were finalized and strategies for Phase III formulated.

A National Executive Management Seminar (NEMS) on Tracer Technology in Mining Industry was conducted at Philex Minesite, Benguet, Philippines on 26-28 February 1990. The use of Tc-99m and Cs-137 for measuring flow-rate and thickness, respectively, in pipelines was demonstrated during the 3-day Seminar. Nine engineers from Philex, Atlas and PNRI attended the Seminar.

### 1.2 Nucleonic Control Systems

The 2nd Regional Executive Management Seminar (REMS) on Nucleonic Control Systems in Mineral Processing was held at the Baguio Country Club, Baguio City, Philippines on 21-23 February 1990. Nine executives and managers from 8 Member States, 12 NCs and 3 experts from Australia and India participated in the Seminar.

### 1.3 Non-Destructive Testing

The main activities performed in this sub-project are in the area of training and certification of NDT personnel.

A) Training

In 1989 the country hosted its first Regional Training Course (RTC) on Ultrasonics Testing, Level 3 on March 6-24, 1989 with 14 participants in attendance. Participants were also sent to RTC-RT3 in Kuala Lumpur, Malaysia on September 4-22, 1989, a Regional Workshop in Bandung, Indonesia on the fabrication of test pieces on November 6-17, 1989 and a Regional Workshop on Non-Destructive Examination of non-metallic materials on September 25-29, 1989 held in Tokyo, Japan.

For 1990 the following training courses and related activities are planned:

March 7 ----- Symposium on NDT Certification  
April 16 - May 4 National Training Course on RT-2  
May 16-27 ----- National Training Course on UT-1  
June 4-22 ----- Regional Training Course on RT-3  
Aug. 6-24 ----- National Training Course on UT-2  
September ----- Certification examinations (tentative)  
Oct.22-Nov.29 --- Regional Training Course on SM-2  
Nov. 9 ----- PSNT Convention

B) Certification of NDT Personnel

In 1989 a national certifying body (NCB) was organized with the support of the local NDT Society, the Philippine Society of Non-Destructive Testing. The NCB takes over the functions of

certification which was handled before by a national co-ordinating committee on NDT (NCC), a body representing varied types of organizations engaged in or interested in the promotion of NDT.

#### 1.4 Radiation Technology

##### A) Radiation Curing

Implementation of the project started in 1988 with the visit of Professor Garnett and with the Forest Products Research and Development Institute of the Philippines (FPRDI) as the major proponent. This year a UV lamp is expected to arrive and will be installed at the Institute for demonstration and training. A senior staff of the project will attend a Regional Executive Management Seminar on Radiation Curing in Jakarta, Indonesia on March 19 - 21, 1990.

##### B) Medical Sterilization

A National Training Course on Radiation Sterilization is planned in September or October of this year. The Course will need one or two experts for lectures on microbiology and radiation sterilization practices.

A quality assurance manager from Adamson and Adamson, Inc., a manufacturing company of medical supplies in the Philippines, attended a Regional Training Course on Quality Control and Sterility Assurance held in Bangkok on 13-20 February 1989.

### C) Electron Beam Treatment of Flue Gases

This activity was started in 1989 when inquiries were sent to the National Power Corporation and the Philippine National Oil Company as regards their interest and opinion on the subject. Both firms indicated interest in the visit of a mission to be sent under the project possibly this year. A one-day National Executive Management Seminar will be scheduled in conjunction with this mission.

## 2. Medical and Biological Applications

### 2.1 Use of Computers in Tc-99m Imaging

The Philippines participation in this project is in the attendance at training courses on the subject. A medical technologist from a private hospital with nuclear medicine laboratory attended the second training course in Australia.

### 2.2 Radioimmunoassay of Thyroid Related Hormones.

The project counterpart attended the National Co-ordinators Meeting held at Chiang Mai, Thailand on 12-16 March 1990. A PNRI participant attended a training course on the Optimization of Production Techniques and Distribution Schemes for Reagents for RIA.

### 2.3 Inhalation Imaging for Diagnosis of Respiratory Diseases

A study validating earlier studies of aerosol scans in India with the use of the BARC aerosol generator was performed under this project. Perfusion and aerosol lung scans were performed in 10 normal subjects (mean age - 28 years) and 40 patients (mean age - 58 years) with a diagnosis of chronic obstructive pulmonary diseases based on history, physical examination, chest x-ray and spirometry. Perfusion scan was done with Tc-99m labelled macroaggregated albumin. Aerosol scan was performed with Tc-99m-phytate nebulized through the (BARC) aerosol generator.

The study validated the experience in India and demonstrated the BARC aerosol generator as an ideal equipment in performing inhalation lung scans.

### 2.4 Development of Radiation Protection Infrastructure

The Philippines has expressed support to the project since the Project Formulation Meeting held in Tokyo, Japan. Philippine participants were also sent to subsequent training courses and workshops organized by the IAEA in co-operation with the Governments of Australia and Japan. The Philippines would like to express its desire to participate in the forthcoming

co-ordinated research programme which is to be highlighted by an intercomparison run of personnel dosimeters with the objective of improving the accuracy of personnel dose assessment using films or TLDs. This is not only timely but also an extremely necessary activity to further strengthen radiation protection in the RCA region. ( A participant will be attending the October 1990 Meeting).

#### 2.5 Compilation of Anatomical, Metabolic and Physiological Characteristics of Reference Asian Man.

Age-and-sex specific data on the height and weight of the total body were compiled from files of physical examinations of students at a private university for the year 1987-88. Data on the mass and dimensions of internal organs have not been collected.

Calculation of nutritional intake, by age and sex, was performed using dietary consumption data from five barangays in a province of the Philippines.

#### 2.6 Radiation Sterilization of Tissue Grafts

A bone and tissue bank constructed in the compound of the Philippine General Hospital will be inaugurated this month. These grafts are used in reconstructive surgery. The project counterpart together with 3 other participants from Philippine

hospitals attended an IAEA-RCA Regional Workshop on Radiation and Nuclear Techniques for Sterilization and Clinical Quality Control of Tissue Grafts in Tissue Banking held in Bangkok, Thailand on 13-22 November 1989.

## 2.7 Care and Maintenance of Nuclear Medicine Instruments

The activities performed under this project are:

a. Equipment inventory - An inventory was made in eight hospitals in the country, six are government-owned and two private institutions. The status of the instruments, whether functioning or not, as well as the instrument age, was also looked into.

b. Assessment of personnel capability for maintenance. The personnel profile of the Nuclear Medicine Sections and the capability of the Institution wherein the Nuclear Medicine Section is located have been assessed. The nuclear electronics training course conducted by PNRI and which was developed under a previous RCA project was modified into a 50-50 ratio of theoreticals to practicals to suit present needs.

c. Logbook Keeping - It was found that there was a systematic recording of calibration checks, which are only function checks done before an instrument is used. When the instrument starts malfunctioning, no details of the malfunction nor of the repair has been recorded.

## 2.8 Imaging Procedures for Diagnosis of Liver Diseases

The Chief Scientific Investigator of the research contract on "Quantitative Evaluation of Nuclear Medicine Imaging Procedure for the Diagnosis of Liver Diseases in the Philippines" attended the preparatory Meeting on Evaluation of Imaging Procedures for the Diagnosis of Liver Disease Phase II which was held in Seoul, Korea on September 7-9, 1989.

## 3. Agricultural Projects

### 3.1 Nuclear Techniques to Improve Domestic Buffalo Reproduction

The project counterpart attended the Final Research Co-ordination Meeting on the Use of Nuclear Techniques to Improve Domestic Buffalo Production in Asia held in Queensland, Australia on 20-24 February 1989.

### 3.2 Asian Regional Co-operative Project on Food Irradiation

The Philippine Government wishes to participate in the new UNDP-funded Project on Food Irradiation Process Control and Acceptance under the Regional Project on Food Irradiation, Phase III.

Two project proposals from the PNRI and the Food Terminal Inc. were submitted applying for research contracts. The PNRI proposes a study on the "Irradiation of Manila Super Mangoes to Meet Quarantine Regulations".

#### 4. Research Reactor and Energy-Based Projects

##### 4.1 Research Reactor-based Projects

###### 4.1.1 Research Reactor Utilization

The Philippine Nuclear Research Institute is participating in the Co-ordinated Research Programme on Research Reactor Utilization with a project proposal entitled "Incorporation of IBM-Compatible Personal Computers in the PRR-1".

###### 4.1.2 Basic Science Using Research Reactor

The Philippines continues to participate in this project through attendance in the training courses and the workshops held under this project.

##### 4.2 Energy and Nuclear Power Planning

The Philippines participated in the Regional (RCA) Training Course on Electric System Expansion Planning held at

Kuala Lumpur, Malaysia on May 15 - June 23, 1989 by sending 4 participants coming from MERALCO and NPC.

With the Regional Co-operative Agreement the Philippines has successfully implemented her research projects involving peaceful applications of nuclear energy and other related projects. It is earnestly hoped that the RCA remain a dynamic agreement and will continue its support to developing countries.

Country Statement of Thailand  
19th General Conference Meeting  
of  
Representative of RCA Member States

Mr. Chairman:

The RCA has made great contributions to the promotion of the peaceful uses of nuclear energy in Asia and the Pacific Region and RCA is a most effective programme to accomplish regional co-operation for accelerating the benefits of nuclear technology among the member states. The importance of the use of nuclear energy for peaceful purposes for the economic and social development of many countries is universally recognized. Radioisotopes techniques and radiation technology are increasingly being applied in industry. Since they are capable of saving energy and resources, the applications of the technology are important for industrial modernization.

The role of international co-operation such as through the IAEA, UNDP and some interregional co-operation agreements in facilitating the introduction and development of peaceful uses of nuclear technology is also important. The RCA Regional Industrial Project for the use of nucleonic control system in coal processing and the UV curing in printing and packaging industry have been initiated and Thailand renders co-operations in terms of training venues and demonstration sites. The experience gained from involvement in the project activities would be successfully utilized.

I would like to take this opportunity to express views and comments in connection with the RCA activities in Thailand, as follows:

1. Thailand supports all activities under the RCA project and the UNDP/IAEA Regional Industrial Project extension to Phase III with on-going activities.
2. Thailand fully supports the activities concerning the control of environment and pollution problem. A research project on sewage sludge treatment by gamma irradiation is being carried out by OAEP under a bilateral agreement between Thailand and Japan.
3. The Thai Irradiation Centre (TIC)'s multi-purpose irradiator with 450 KCi C0-60 source is available to be the technology transfer facility for the region in radiation technology.
4. Thailand is the training and demonstration centre on the use of nucleonic control system in coal processing at Mae Moh Lignite Mine of the Electricity Generating Authority of Thailand. A series of seminar, workshop and training course is being organized each year in 5 consecutive years for the RCA Member States commencing from 1989-1993.

5. Thailand is setting up the training centre for the UV curing in printing and packaging industry under the RCA Industrial Project.

Finally, I would like to take generous notes of thanks to the International Atomic Energy Agency (IAEA), the United Nations Development Programme (UNDP) and all donor Member States for their great contributions to achieve the objectives of the RCA programme.

Thank you!



COUNTRY STATEMENT OF VIET NAM  
19TH RCA GENERAL CONFERENCE MEETING

Mr. Chairman,

First of all, I would like to join with other delegates to congratulate you on the election as the chairman of this 19th RCA General Conference Meeting.

Secondly, may I call on you to congratulate our successful co-operation over last years. To be here, at this meeting, is a precious opportunity for me to share with you our progress and good-will which have been done and will be done in our co-operative programme under the auspices of the IAEA. On behalf of the Vietnamese delegation, I would like to express our strong support on the draft for the Phase III of the Regional Industrial Project RAS/86/073 with our comments and commitments presented in our observations and proposal to the project draft. We do appreciate the two additional sub-projects on Radiation Safety and Nuclear Instrument Maintenance outlined in the draft which would compensate the some what inequality in funding by the Agency during last 10 years (namely by TACF).

Regarding RCA new project proposals, we would like here to reiterate our willingness of participation to the new projects proposed by Japan and Australia on pollution problems and termite control and eradication respectively. Viet Nam also lays its support on the new project entitled: "Nitrogen Fixing Trees for increasing soil fertility, Crop and Fuel wood production".

Mr. Chairman, distinguished delegates,

One of the problems which here I would like to emphasize is the significant assistance of the Agency in financial as well as in organizational aspects in overall RCA performance. Amongst the points noted in the "Evaluation Note", my country highly values the steady assistance of the Agency through its TACF and Regular Budgets activities. We also do appreciate the valuable contributions of the donor countries in the Region, especially of Australia and Japan in supporting RCA programme implementation. For the countries with low-level economy as our, RCA programme really plays a needful role in the development of Nuclear Science and Technology. Therefore, the tendencious growth of the extra-budgetary which reached the high level in 1989 is the evident good-will of Australia and Japan and other donor countries in encouraging RCA countries to deliver high level of performance in the field of Nuclear Science and Technology. We do hope the amount of extra-budgetary recorded for 1990 is only the temporary one. We also well recognize that with the supports from the Agency and donor countries and our congenial co-operation, all RCA Member States have been succeeding in enhancing Research, Development and Training related to Nuclear Science and Technology which are the aims of our Co-operation on bringing Peace and Prosperity in Asia and Pacific Region. For that reason we fully agree with the extension of the Regional Co-operative Agreement for the period of 1992 - 1997 and believe that our willingness is with the stream of all you.

Mr. Chairman, distinguished delegates,

It is a great honour for me at this meeting, on behalf of the Vietnam Government, to invite you, the delegates from all RCA Member States to come to Ho Chi Minh City where the 13th RCA Working Group Meeting will be held from 4-7 March, 1991.

Thank you!



Proposed RCA Project Activities for 1991

Field	Project	Technical Officer	Project No./comments
Agriculture	<p>Food Irradiation Process Control and Acceptance</p> <p>Increasing the Yield and Nitrogen Fixation Capabilities of Common Grain Legumes</p> <p>Control of Tropical Plant Viruses with the Help of Nuclear Techniques.</p>	<p>P. Loaharanu</p> <p>S. Danso</p> <p>A. Micke</p>	<p>RAS/89/044 (UNDP) RAS/5/020</p> <p>RAS/89/045 RAS/5/021</p> <p>RAS/5/022</p>

Proposed RCA Project Activities for 1991

Field	Project	Technical Officer	Project No./comments
Industry	<p>Regional UNDP Project for Asia and the Pacific (RCA) on Industrial Applications of Isotopes and Radiation Technology</p> <p>Sub-projects:</p> <ul style="list-style-type: none"> <li>- Tracer Technology in Industry</li> <li>- Non-Destructive Testing</li> <li>- Radiation Technology</li> <li>- Nucleonic Control Systems</li> </ul>	<p>J. F. Easey (Project Officer) Manoon Aramrattana (UNDP Project Co-ordinator)</p> <p>R. Mani J. Jin (IAEA Expert)</p> <p>B. Zatolokin R. Gilmour (IAEA Expert)</p> <p>V. Markovic</p> <p>R. Mani</p>	<p>RAS/86/073 (UNDP) RAS/8/061 RAS/8/062 RAS/8/064</p>

Proposed RCA Project Activities for 1991

Field	Project	Technical Officer	Project No./comments
<p>Medical and Biological</p>	<p>Quantitative Evaluation of Nuclear Medical Procedures for Diagnosis of Liver Diseases (Phase II)</p>	<p>A. Cuaron</p>	<p>E1.30.06</p>
	<p>Improvement of Cancer Therapy in Asian Countries (Phase II)</p>	<p>F. Durosinni-Etti</p>	<p>E3.30.08</p>
	<p>Aerosol Inhalation Imaging for the Diagnosis of Respiratory Diseases in Developing Countries</p>	<p>A. Cuaron</p>	<p>E1.3.05</p>
	<p>Use of Computers in Tc-99m Imaging</p>	<p>A. Cuaron</p>	<p>RAS/6/016</p>
	<p>Development of Tc-99m Generators Using Low Power Research Reactors</p>	<p>H. Vera Ruiz</p>	<p>F2.20.09</p>
	<p>Radiation Sterilization of Tissue Grafts</p>	<p>R. Mukherjee</p>	<p>RAS/7/003 E3.10.04</p>
	<p>Radioimmunoassay of Thyroid Related Hormones</p>	<p>R. Piyasena</p>	<p>RAS/6/011</p>
	<p>Nuclear Techniques for Toxic Elements in Foodstuffs</p>	<p>E. Cortes Toro</p>	<p>E4.30.2</p>
	<p>Care and Maintenance of Nuclear Medical Equipment</p>	<p>P. Ambro</p>	<p>RAS/4/088 E1.10.06</p>

Proposed RCA Project Activities for 1991

Field	Project	Technical Officer	Project No./comments
Radiation Protection	<p align="center"><b>Strengthening of Radiation Protection</b></p> <p>Activities:</p> <ul style="list-style-type: none"> <li>- CRP: Reference Asian Man</li> <li>- Regional TC:</li> <li>- Workshop: Dosimetry Intercomparison</li> </ul>	<p align="center">P. Strohal</p> <p align="center">A. Moiseev</p> <p align="center">P. Strohal</p> <p align="center">R. Griffith</p>	<p align="center">RAS/9/006</p> <p align="center">J3.20.01</p>
General	<p align="center"><b>Research Reactor Utilization</b></p> <p align="center"><b>Basic Science Using Research Energy and Nuclear Power Planning</b></p>	<p align="center">R. Muranaka</p> <p align="center">R. Muranaka</p> <p align="center">P. Molina</p>	<p align="center">RAS/4/011</p> <p align="center">RAS/0/013</p>