Mr. Soberbin

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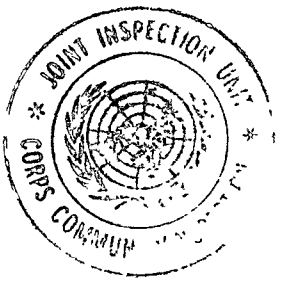

Observations on the work of the International Atomic Energy Agency in Burma

REPORT

by

L. A. Scopes
Joint Inspection Unit

Geneva
January 1971

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1. The purpose of the present report, founded on indications picked up during four weeks of inspection in November 1970 of all activities in Burma of members of the UN family, is to place before the Agency the impressions of an outsider with no technical knowledge of nuclear science, in the hope that these may be of some interest and of some use for the continuation of the valuable technical co-operation work of the Agency, not only in Burma but elsewhere.

2. I was fortunate to catch, before their departure from Rangoon, the two experts who had served on the IAEA/UNDP/TA projects on Nuclear and Radiochemistry (BUR/68/22) and Nuclear Instrumentation (BUR/69/1). The former project, initiated in 1966, has had three successive experts in charge - not uninterruptedly, alas. The latter is now concluding after two years in the charge of one expert. For ease of reference in what follows I shall call these project/expert 68 and 69 respectively.

3. It appears to me that the most important point about activities in nuclear science in Burma is that they have no centre. There is a Radioisotope Department at the Rangoon General Hospital under the Ministry of Health; a budding Radioisotope Laboratory at the Agricultural Research Institute at Gyogon (GARI) under the Ministry of Agriculture; nuclear sections of the chemistry and physics departments of the Rangoon Arts and Science University (RASU); project 69, housed at the Union of Burma Applied Research Institute (UBARI). Co-ordination of policy and determination of priorities are not facilitated by such circumstances and this clearly affects the efficiency of the liaison between the Agency and Burma in the arrangement of technical co-operation. In the field of maintenance alone, the situation is thus made more complicated than it need be. Expert 69's mandate was to train local staff at UBARI and other institutions in Rangoon concerned with nuclear science (my underlining) in the repair and maintenance of nucleonic equipment. This instruction he has carried out with considerable success. He was also charged to advise on the organization of a repair and maintenance service for electronic equipment used in nuclear science in Burma. I do not know what his final recommendations will be in this respect, but I am sure that some degree of rational centralization would offer the possibility of economies in material, manpower and skill.

4. Burma is one of the countries in the tropical rain belt where particular care must be taken to protect machinery and equipment against damp. This was the theme song of many of the UN experts with whom I talked in Rangoon. The use of air-conditioning is most important (although I even saw vessels of sulphuric acid placed around laboratories to combat humidity), but air-conditioning is popular in Burma neither with those who have to pay for it nor with those who have to work in it. I saw, for example, that in the Nuclear Physics Research Laboratory at RASU, which had been equipped with the wise fail-safe precaution of two air-conditioners, on the break-down of one of them, it had simply been removed and the vent bricked up. There seems to be little general realization of the vital importance of fighting damp and I lost count of the number of air-conditioned rooms into which I was ushered where the doors were simply left wide open until my departure - or long after, for all I know. This situation is advantageous neither for the Member State, whose scientists will be baulked in their work by mechanical failures, nor for the world community, who will be invited to replace unserviceable equipment. The problem, as I have suggested, is not one for Burma alone, although it is in Burma that I myself have seen it in its most acute form, and I wonder whether it might not perhaps be useful if the Agency were to collect information from its experts in countries most affected, publish details of damage caused - perhaps with gruesome illustrations - and work out and promulgate standards for the protection of electronic and nucleonic equipment against tropical humidity.

5. I have already hinted at the discontinuity of Agency help to project 68. The first appointment, for the last few months of 1966, may have been intended to be only a reconnaissance, but the expert concerned, whose work was clearly highly valued by his Burmese colleagues, evidently did a great deal in a short time to set up equipment and to assemble and train a team to operate it. The result of his efforts had however largely evaporated by the time the second expert arrived on the scene some two years later after delays in reaching agreement on an acceptable candidate which make sad reading in the project files. The third expert arrived five months after the departure of the second - a gap that would of itself not have been significant had greater care been taken over briefing. This is not

the first time that I have had occasion to recommend strengthening the Agency's briefing procedure. There is much that a UN expert can do in preparation for his mission if he is given a good picture of what he may expect on arrival at his new post - particularly if his specialization is in nuclear science, where progress in different countries is still very uneven. If he has some idea what literature he should bring with him, what sort of equipment he will find available, what experiments he might perhaps work out in advance, the value of his services can be greatly enhanced. I presume that there are departments in the Agency where relevant information is available for communication to a visiting expert. It may be objected that it costs money to bring an expert to Vienna for briefing, but I find it entirely likely that this, in reasonable circumstances, might be negligible in comparison with the increased efficiency - particularly in nuclear science - of a well-briefed expert ready to enter into action as soon as he arrives at his post.

6. In a parallel case, the cost effectiveness of expert 69 might have been greater had it been possible to prepare his mission in advance rather than plunging him into untried waters. Had it been possible to send in a short-term consultant to decide what equipment, spare parts, etc. were required for the job and to await the delivery of these before despatching the expert, much wasted time could have been saved. I am aware of the difficulties connected with the availability of experts at any given time and with the occasional mutual incompatibility of different experts' ideas on the same problems, but I nevertheless think that in some cases a more carefully thought-out approach to projects would pay good dividends.

7. My attention was drawn to the frequent diversity and incompatibility of instrumentation supplied through the Agency. Diversity presumably has some advantages for broadening experience, and successive experts have differing preferences, but I wonder if there should not be in IAEA Headquarters (or perhaps there already is) some readily accessible repository of information on what equipment is held by which project or laboratory so that at least incompatibility can be avoided to some extent in the interest of economy of spares, inter-changeability of parts,

attention to and make specific inquiries about the text-book position in Burma and in other countries similarly placed in which we are, in my view, still at the stage where ten pounds worth of text books may advance nuclear science more than thousands of pounds worth of equipment. The same applies to the provision of films as teaching aids, application for which, I was told, was inhibited by the fact that the beneficiary would have to find the cost of return postage. This seems to indicate either an excess of red tape or a breakdown of communication between expert and HQ.

10. What of the future? I spoke to one aspect of the future in the person of a member of the chemistry department of RASU who had returned from abroad two months earlier to take charge of nuclear chemistry teaching with the degree of Ph.D. The parallel nuclear physics classes are in the hands of another returned student. On the physics side there are sixty aspirants for the degree of Master of Science, forty in their first year and twenty survivors in their second. We are seeing, perhaps, the end of the beginning, but the going will be tough for some way to come and I am glad to see that the co-operation of the Agency and UNDP is to continue in the form, inter alia, of a plant-breeding expert, a nuclear physicist and equipment including a neutron generator of more useful potentiality than the very weak source which is all that has been available hitherto. I would like to suggest, however, that it might be useful to discuss with the Burmese authorities the desirability of some sort of a watching brief over former IAEA projects, held by a designated expert working in Burma or by visiting consultant, in order that the Burmese authorities may be counselled from time to time, as may prove desirable, about any danger that might exist of backslipping such as occurred after the first stage of project 68.

Summary of recommendations

1) Issue of standards for the protection of nucleonic equipment against humidity (para. 4).

2) Better briefing of experts (para. 5).

3) Better preparation - and timing - of certain projects (para. 6).

4) Avoidance of undue diversity of equipment (para. 7).

5) Durability a better criterion than cheapness (para. 8).

6) Consideration of credit-in-trust for spare parts (para. 8).

7) Provision of text books (para. 9).

8) Flexibility in meeting minor expenses promising large dividends e.g. provision of films as Teaching aids (para. 9).

9) Consultation with Burmese authorities on continuing interest by IAEA in past projects (para. 10).