



REPORT

on

Selected Ideas for Improving Field Operations

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A. Introduction

1. Before discussing specific problems and issues faced by developing countries in expanding their capacity for development, and the role of UN technical assistance in helping to overcome these difficulties, I would like to make some broad observations.

2. There are continuing opportunities to assist the governments of developing countries to improve their overall economic planning and programming. Such improvements should not only strengthen the countries' development efforts, but provide a sounder basis for identifying priority areas for UN technical assistance. This report, however, is restricted to considering ways and means of strengthening UN technical assistance activities after the priority areas for UN projects have been established by the government, primarily because matters such as "comprehensive country or joint programming," "country strategy," etc., will undoubtedly be explored in depth in the report of the Capacity Study Group. This report is also restricted to country projects (as opposed to regional or inter-regional projects). It is based on case studies in the field supplemented by extensive discussions at all of the various agency headquarters.

3. The design and preparation of a UN technical assistance project and its subsequent implementation involves both a UN executing agency and the country's technical ministry that has been designated as its executing agency for that project. The attitude of the UNDP Resident Representative's Office and the government's planning ministry toward a given project proposal may have had some influence on its design, but in the final analysis the efficiency and effectiveness with which a given project is developed and implemented depends almost wholly on how well equipped these two executing agencies are to carry out such activities.

4. It is my observation that the various UN executing agencies have not been very effective in helping technical ministries of developing countries to strengthen their capabilities to plan and carry out technical assistance activities. Much more can be done to help these ministries to mobilize their internal resources in order to share fully in the task of planning and implementing technical assistance projects, and thereby to expand their capabilities to eventually run their own show without outside assistance. The UN expert continues to draft nearly all project proposals and operating plans by himself instead of working with local experts as a team, and in many, perhaps most, cases to implement the projects with a minimum of counterpart training. This is not the way to help a developing country to become truly independent and self-reliant. It is my view that this situation will continue until real progress is made in strengthening the technical ministry as an institution to plan and control its own programmes and its foreign assistance projects. This is the key bottleneck in really coming to grips with the problems discussed later in this report.

5. In the field I have noted a strong propensity for many UN experts to try to maximize the number of graduates, the amount of research completed, etc., by their own efforts during the life of a project, rather than to focus primarily on building strong institutions to carry on after they leave. When they eventually go home, they may have left little or nothing behind to carry on what they have started.

6. Later in this report I attempt to analyze in detail some of the principal ingredients of institution building with respect to UN projects. If the UN agencies are going to make further important progress in helping on these matters, it will of course have to be on a co-operative basis with the executing ministries. However, as pointed out above, the UN should be

more helpful to technical ministries in training their staff and developing better organizational arrangements to plan and co-ordinate their activities including technical assistance projects. What is needed is additional institution building within the technical ministries themselves, which will eventually open the door to such improvements as joint preparation of project requests and work programmes, a decrease in the time required to clear names or to get a fellowship programme under way, the timely appointment of suitable counterparts, joint evaluation of projects, better mobilization of internal resources to support a given project, and so on.

7. In order to bring these observations into focus with specific things the UN family might do, I am presenting below a picture of the typical situation I have found in the field regarding planning and programming.

B. Planning and Control

8. Senior officials of the ministry with responsibility for development planning tend to take little interest in technical assistance except those Special Fund projects that may lead to large capital investments. Their ministry usually has a focal point for general co-ordination of technical assistance activities and approval of priorities. In other words, it is a place to react to and approve technical assistance projects prepared by others at the technical ministry level, primarily in terms of insuring that the local funds involved do not exceed amounts included in the budget, or that the foreign currencies requested are within totals probably available from external sources. It is normally not a place to initiate improvements in planning and control of individual projects.

9. More specifically, national plans and the planning agencies in developing countries are not oriented towards technical assistance, but towards capital investment. Development planners live in the world of GNP, balance of payments, capital output ratios, price levels, tax collections, external

debt burden, input-output studies to determine if a programme is internally consistent, politically-determined, and so on. Their long term plan is designed primarily to reflect the desired over-all growth rate of the country and priorities by major sectors, and the necessary capital inputs and rate of internal savings to achieve such goals and still keep the balance-of-payments situation and internal price levels under control. It is not usually designed to provide specific guidance for foreign technical assistance although it may have annexes by economic sectors containing some useful target data in terms of planned agricultural production, students graduated, miles of highways and the like, and perhaps even a list of technical assistance projects.

10. Last year I spent about three months each in two semi-developed countries that were reported to have sophisticated 5-year plans but I do not recall a single instance when a UN official or expert made any reference to the country's long-range plan, or had one in sight on his desk. It did not seem to be "relevant" to persons concerned with technical assistance activities.

11. In contrast to the "economic planner" described above, the "technical assistance planner" lives in a different world. He lives in the world of people: of education, training, fellowships, health clinics, research institutes, manpower studies, surveys of national resources and markets, transfers of technical knowhow, organisation and management, and the like. He understands the kinds of problems and issues discussed later in this report and can help solve them. Unfortunately, there are comparatively few trained technical assistance planners in developing countries. Where they exist, however, in organizational units attached to the head of technical ministries, the door is open to major improvements in the planning and control of UN projects as well as the overall ministry programme.

12. It is my firm conviction that unless the technical ministries can make some real headway in establishing and supporting units for programming

and control of their activities, there are a number of key weaknesses in UN supported technical assistance projects that we are just going to have to live with. At the same time, I recognize some major obstacles in moving in this direction, particularly in certain economic sectors.

13. The areas where it should be easiest to make headway are those sectors of the economy that are traditionally organized and run in all countries on a highly centralized basis by the central government. I have in mind particularly such activities as transportation and communications. There are usually people in the technical ministries concerned with such activities who are informed about planning and control of projects. It has been my observation that UN projects for such activities are subject to better programming and control than the average UN technical assistance project.

14. Certain other activities, notably agriculture, education and health, are often the basic responsibility of the separate states or provinces and it becomes unusually difficult to plan and operate projects under such circumstances. A good example is India. Some of the "old-timers" there among the foreign officials told me that their greatest single handicap in developing and carrying out technical assistance activities was the fact that basic responsibility for such activities resided in each individual State. I found a similar situation on a previous UN assignment in Nigeria. For example, until a few years ago Nigeria did not even have a Federal Ministry of Agriculture, and this ministry's role even today is comparatively small.

15. Another major obstacle is the lack of know-how regarding technical assistance planning and programming. Many volumes have been written on development planning, but the same is not true for technical assistance planning. I was told that when UNESCO established an institute for educational planning a few years ago, there was not a single book in existence on the subject worthy of the name. There is great concern these days about un-employment in developing countries, but where in the literature

on economics is there a good analysis of this subject? Five-year plans around the world very conveniently leave out this item in their equations. A very sophisticated industrial technology based on labour-saving through more intensive use of capital is available in all advanced countries; but where do you find more than isolated fragments of an industrial technology based on modern science which is designed for the vast majority of developing countries where labour is not the limiting factor, namely a technology based on capital-saving rather than labour-saving?

16. In spite of the obstacles, some limited progress is being made here and there in establishing focal points for planning and programming with qualified staff in the technical ministries of the central government. In some cases a start is being made by recruiting United Nations or bilateral experts for such purposes. I have seen this role filled by Europeans who were with the former colonial regime and stayed on. Country representatives of UN agencies who have an office right in the technical ministry can often help sell the idea of better planning and controls.

17. At least one UN agency is bringing employees of technical ministries of developing countries to its headquarters for training in this field. Other UN agencies have a practice of sending high-ranking officials to a developing country to prepare an over-all programme for a technical ministry extending over several years. In spite of these various commendable efforts, however, this task is still largely ahead of us.

18. The above analysis suggests to me that further substantial progress in better planning and implementation of technical assistance projects is going to be achieved primarily by separate initiatives by the UN agencies to help the technical ministries in their field strengthen their competence in such matters, not through more inter-agency meetings on co-ordination in New York and Europe. The situations found in the different countries no doubt will vary widely and some countries may not welcome initiatives by UN agencies in this direction.

19. More specifically, each UN agency should assign responsibility in its headquarters for helping technical assistance ministries to strengthen their capacity to plan and control their activities. Presumably, this help would normally be given by organizational units in headquarters established on a geographic basis. Continued close relationships with planning ministries is essential for achieving certain objectives, but is not an alternative to promotion of technical assistance planning and control of individual projects in technical ministries.

20. Although it may help in the long run, the above approach does not come to grips directly with the problems faced in implementing multi-disciplinary projects involving more than one UN agency. It is not only difficult to sort out relations between two or more UN agencies, but the problems involved in working with two or more ministries of the recipient country can become extremely frustrating. "Horizontal co-ordination" between ministries is difficult enough to achieve in very advanced countries, and is almost impossible to attain in some developing countries. The question can be raised as to whether the percentage of multi-disciplinary projects that have turned out well so far is high enough to be worth the effort; or whether it is better to break up such proposed projects into pieces, each involving only one agency and one ministry with the necessary informal co-ordination from the outside; or establish semi-autonomous corporations or institutions for such activities.

21. Outlined below are a number of very stubborn problems observed in the field and discussed at the various agency headquarters, nearly all of which would become more manageable and more subject to positive solutions if the executing ministry involved in the recipient country had an effective planning and control unit, with strong support from the minister's office.

C. Buildings

22. It is a common experience in the field to observe United Nations

projects housed in new buildings, even though there were other government buildings in acceptable localities that might have been used. Since perhaps the most fundamental objective of any UN technical assistance project should be to help the local government mobilize its internal resources for development, it would seem to make sense for UN officials during the preparatory stage of projects to co-operate with local officials in seeking facilities already in existence for a proposed new project in order to reduce local costs and maximize the effective use of local resources. It is recognized of course that there will be many projects for which there simply is no practical alternative but to build new structures or add on to present buildings.

23. It was encouraging to meet senior officials in several agency headquarters who had become very conscious of the need for more careful screening of building requirements for UN projects, and were promoting such a policy in their agencies.

D. Counterpart training and fellowships

24. UN officials face extremely difficult problems and issues in coming to grips with the counterpart training requirements of UN technical assistance and fellowships. For purposes of analysis they can be divided into five categories and summarized as follows:

(a) Attitude towards training

25. The usual "official" explanation of the basic task of UN technical assistance experts is to train their counterparts to take over their work and then go home; in other words, to work themselves out of a job. Descriptions of Regular, TA and Special Fund projects usually indicate that they are designed to achieve that objective. In practice, however, this objective is not accepted by many, perhaps the majority of UN experts and their superiors. They take the position that the development of human resources, in other words the expansion of these countries' capacity for development, is a

long term proposition, and they expect the basic projects to be continued for the foreseeable future. They see nothing wrong with the fact that, although experts come and go, many of the basic Regular and TA projects (not Special Fund projects) even in semi-developed countries were started ten or fifteen years ago and are still almost automatically extended at each termination date. Most of these experts work as individuals and do not report on the status of training of counterparts (if any). A senior official in one large UN agency told me that there was not a single status report on the training of counterparts in the whole building. In another agency headquarters an official said they had such status reports, but when asked for samples he was unable to find any after a quick look at his files.

26. Agency headquarters officials take strong exception to the conclusion that Regular and TA projects are almost automatically extended at termination dates. They will describe in detail the committees that review all projects during the budget season to determine whether they should be extended. They point out that often the extension is in fact a different project, but the description of the project was not formally changed. An attempt was made to check this matter statistically through a review of the history of Regular and TA projects of several large agencies in selected countries, which disclosed that a substantial number of projects were regularly extended at their termination dates. Checks in the field in two semi-developed countries did suggest, however, that during the past year or two the decision as to whether Regular and TA projects should be extended was being given a closer look, particularly after the introduction of the new budgetary procedures on TA projects. It is also noted that initial project termination dates often prove to be unrealistic because of recruitment

difficulties with both local and international staff; but repeated extensions of termination dates call for some other explanation.

27. The pressures on agency headquarters to extend projects are formidable. Several of the larger UN agencies are faced today with substantial numbers of unemployed experts waiting for another assignment. Furthermore, those UN experts in the field who are not on leave of absence from a career position at home and who do not have alternative job opportunities in sight, lack an incentive to push hard on counterpart training and work themselves out of a job.
28. The attitude of governments is pertinent to the above analysis. Faced with a serious shortage of trained personnel, officials of developing countries cannot be blamed for looking upon the different forms of technical assistance as a way to get well trained people to fill jobs in their government at the lowest possible cost. However, I have noted a growing awareness that even UN personnel do cost the recipient government a considerable amount of money, and officials at the policy level are expressing interest in more careful screening of UN projects as more and more trained locals are available.

(b) Use of local resources

29. Observations in the field clearly indicate that designers of UN projects have concentrated on the mobilization of external training resources in the form of training abroad and bringing in outside experts, rather than concentrating on helping local officials mobilize their internal training resources and supplementing them with external resources only as needed. For example, there is much evidence that training of counterparts

is usually met by sending them abroad even though the country is semi-developed and has its own advanced educational centres and other training facilities. Conversations with many Special Fund project managers in the field indicated that fellowships listed in plans of operations usually are not screened to determine if at least part of the training requirements could be met locally; even if they could, there usually is no provision for financing such local training. In agency headquarters it was disappointing to find so few officials who seemed to be really concerned with helping particularly the semi-developed countries to mobilize the use of their expanding training resources and thus become more self-reliant.

(c) Training abroad

30. Officials in several agency headquarters stressed the importance of the fact that many persons from developing countries who are trained abroad are unable to make much use of their training when they return home because their superiors have not had a similar exposure to training in developed countries and resist change. It is also very frustrating to return home and find that you are not promoted any faster with the advanced training, nor do you receive any increase in salary; in fact, the period of training abroad may not even count towards seniority rights. These agency officials also point out that even if a trainee returns to a position in his government where he can make good use of his training abroad, all too often he accepts a position in a private company at a much higher salary if his training is also useful to industry. My observations in the field support the above, but the importance of these difficulties seemed to vary rather widely between UN agencies. Of concern also was the number of fellowships for too specialized or advanced training for which the trainee found little or no demand when he returned home.

(d) Training at the site

31. A number of Special Fund projects were visited in the field which had effective programmes to provide at the project site the necessary experience to counterparts to carry on after the expert left; and qualified counterparts were on the job. However, in perhaps the majority of cases, particularly for Regular and TA projects, the training of counterparts was unsatisfactory. The lack of counterparts for many projects is well known. It is also unfortunately true that when pressed to appoint counterparts, some developing country governments have adopted the policy of naming "professional" counterparts who will serve as counterparts over the years for various projects to fulfil the agreed provisions of the project, but in practice have very little to do with the experts involved. Even if a satisfactory counterpart is named, experience shows that it is often unrealistic to assume that an expert is a good teacher and well qualified to train counterparts. Finally, penetrating questions are being raised in the field regarding projects where training should be started a year or two in advance of the rest of the project work programme; and in the case of Special Fund projects, where it might be financed as a separate TA project. All of the above points were very well known to all agency headquarters personnel contacted, and have been debated for years.
32. In seeking ways and means to strengthen the effectiveness of UN agencies in on-site training, I feel that the following proposals have merit:
- (i) Generally avoid the project involving only one expert except for OPAS appointments or those cases where the expert's job is in fact to prepare a Special Fund proposal. I am unimpressed with the effectiveness of individual experts for institutional building .

or training generally.

(ii) Carefully evaluate technical assistance proposals, particularly in the least developed countries, in terms of whether they should be staffed with regular technical experts or OPAS-type appointments. I think we have often been frustrated by the lack of effective on-site training by conventional standards for a given project when a more careful study before project approval would have indicated that it was unrealistic to think of anything beyond an OPAS-type assignment at the country's present stage of development.

(iii) Speed up the timetable in moving from regular experts to only consultants or termination in semi-developed countries. During this past year I visited many examples of projects where the ministry wanted equipment and fellowships, but not advice. In such an environment on-site training is almost invariably unsatisfactory. I particularly remember chatting with a UN project manager at one site, and he said, "these fellows simply refuse to listen. They feel they have read the books, and refuse to take advantage of the experience we have to offer."

(iv) Give top priority to those project proposals where the local government has already established an institution, has attempted to operate it for sometime without outside help, and then calls on the UN for assistance in overcoming certain difficulties or raising its standards. The most difficulties appear to arise when the UN steps in and starts a project "from scratch" before the local officials have struggled with it alone. In such cases, the project becomes identified too much with the UN, and local officials do not feel a sufficient sense of responsibility for it.

(v) Adopt the network analysis discussed later in this report to improve the timing of on-site training. I

question whether any other approach will result in significant improvements.

(e) Training in least developed areas

33. In those countries or sectors of an economy where virtually no qualified counterparts are available, it would seem to make sense to recruit UN experts who would fill operational or executive positions as regular government employees during the transition period and thus help make it possible to release potential counterparts for necessary basic training. The UNDP has the OPAS programme to fill this need. I have observed a number of OPAS assignments in the field that worked out very well. However, in some cases this programme has been difficult to administer, particularly for senior positions. For example, UNESCO recruited a man to serve as Dean of an engineering school in an African country until a qualified local person was available. The UNESCO expert soon found himself in difficulties. He became involved in the selection of individuals for foreign fellowships among many candidates, a very delicate situation for a foreigner to cope with. He was necessarily concerned with the selection of persons to be admitted to the engineering school and inevitably became involved in tribal jealousies. He was concerned with the control of funds for the school, and became vulnerable to charges of corruption. In a situation such as described above, a local person could have been named the Dean and the UNESCO expert could in fact have run the school but be technically only an adviser to avoid direct involvement in the kinds of situations mentioned above; but experience shows that, in certain parts of the world, unless the UN expert assumes the full operational or executive responsibilities of a position, he probably will not be treated as a full member of the team and be given free access to that information necessary to carry out his duties. In other parts of the world, many governments do not favour the use of foreigners in operational posts, which helps

explain why two thirds of all recipient countries have not requested any OPAS experts.

34. At least one large UN agency has found it difficult to recruit persons directly for OPAS positions because they do not receive important "fringe benefits" such as membership in the UN pension fund and health insurance programme, and the status that goes with possession of a United Nations laissez-passer. These difficulties have been surmounted by recruitment as a regular expert and then detail to an OPAS position. Another alleged difficulty is that the recipient government has to pay the full local salary to a UN recruit for an OPAS post, whereas a regular expert usually involves less expense to the government. However, I am told that in most cases, the difference between the local salary and the $12\frac{1}{2}\%$ of advisory salaries which governments must pay, is not significant.
35. In discussing experiences with OPAS assignments, I have been impressed with the very strong support this programme has in the headquarters of at least half of the specialized agencies. Although difficulties may be encountered at senior levels, as illustrated by the case example presented above, the agencies say they have many success stories. Before reaching firm conclusions on this matter, however, I think we need some further study of UN agency experiences in the least developed countries and areas.
36. For example, if a highly under-developed country has a number of OPAS assignments, what should be done concurrently about training? Should a scholarship programme be tied to all OPAS posts? Or should the UN sponsor local training facilities and provide experts to run them? Is it appropriate to have the conventional expert programme and a separate OPAS programme as at present, or would

it be better to have just one expert classification, but introduce that degree of flexibility necessary to tailor his duties and administrative relationship to the local situation, even to the point of eliminating all direct supervisory ties with the agency if considered appropriate? (This latter approach might help to open the door to the use of experts in operational and executive-type positions in those two thirds of recipient countries who have not requested any OPAS appointments up to the present time.) Is it better to concentrate on 2 or 3 large projects, or recruit persons for say ten key operational positions necessary to get certain high priority activities of ministries under way? What has been our recruitment experience? And so on?

Key Problems

37. After discussing the above matters with headquarters staff of several of the agencies, it was concluded that the most urgent problem is to figure out what should be the future role of the UN family in semi-developed countries, particularly with respect to Regular and TA projects. In at least some of these countries the need is declining for UN experts and for counterpart training, except for special situations; and there are indications here and there of a trend towards limiting expert help to short-term consultants. At the same time the demand for equipment seems to be stronger than ever.

38. The issue seems to be whether one can look forward to an accelerating trend towards termination of UN projects, particularly in the Regular and TA categories, in the semi-developed countries; or whether there are to be new kinds of assistance to these countries tailored to a situation where they have made good progress in training people, but are confronted with a serious long term balance-of-payments situation plus the prospect of increasing unemployment and rapid increases in population. Since a very substantial part of UNDP and Regular financed projects are in these semi-developed countries, the UN's future role there is of crucial importance in determining the future total demand for technical assistance.

39. It may be, for example, that in the future emphasis should be placed on helping these semi-developed countries to mobilize their expanding

training and other internal resources instead of focusing UN projects on mobilizing external resources as has been the tendency in the past. (This would involve a much more flexible Plan of Operations). More of the training could be concentrated on programmes designed to exploit technological breakthroughs and opportunities for labour-intensive capital investment. And so on.

40. Another urgent problem involves bringing the training aspects of UN projects under better control through some kind of "status" reports. Discussions in the field and at agency headquarters have highlighted the difficulties involved. At least most developing countries are not accustomed to preparing efficiency reports on individual government employees. If reports on the training progress of individuals were transmitted through usual channels to an agency headquarters, such information might get into the wrong hands and lead to embarrassing situations. For example, an official of one agency headquarters told me that some time ago they started to send some status reports on counterparts from the field to headquarters. A senior individual in one country heard that a rather critical report on himself had been sent in, and he made a special trip to this headquarters to complain about such treatment. It is understood that this incident played a large part in the agency's decision to discontinue such status reports.

41. In spite of the difficulties, however, an executing agency needs to know whether a local co-project manager of a UN project will probably be ready to take over the management of the project in one year or three years; whether trainees abroad are doing well in their studies and will return to the project within a given time to replace the experts after a suitable overlap period; whether approximately 2 per cent or 25 per cent of the fellowship holders failed to come back to their country after training, and what percentage are now working in the fields for which they were trained; what are the prospects for counterparts which have not been provided as agreed upon; if the counterpart is spending only part-time on the project what will happen when the UN expert eventually leaves; and so on. If the United Nations is to proceed in/

an efficient way to help developing countries to learn to run their own show, and not serve primarily as a recruiting agency for foreign experts at low cost, then it would seem reasonable to expect such elementary information as suggested above to be available in convenient form and on a routine basis, not just when there is some sort of a crisis.

42. It has been observed in the field that the UN-supported projects where training activities are most successful typically are "country identified". In other words, these are projects which usually were started before a UN agency came into the picture to help, and are strongly identified with the government, not a UN agency. The senior local staff is usually above average in quality and strongly in favour of change, so that when a fellowship holder returns from training abroad he has an opportunity to make good use of his training with proper encouragement and support from his superiors. Also, because of its strong identity with the government and hence good prospects for a stable future, it is easier for the project to attract and hold good counterparts.

43. A senior official of one of the agencies told me a couple of years ago that after seventeen years in headquarters and the field, the one important lesson he learned was that the agency-supported projects that really turned out well were strongly country identified. He went on to describe a number of projects which were strongly identified with his agency or particularly with individual experts, which in the end were largely failures.

44. The very frustrating situation where a counterpart is trained on the job or abroad and then accepts a position elsewhere because of higher pay or other reasons is of great concern to certain UN agencies, but I feel that a special study of this problem would be necessary before any reliable conclusions could be reached. Also, I have nothing to add at this time to the view expressed by several officials of agency headquarters that the realistic answer to the frustrations encountered in implementing OPAS assign-

ments is "to be flexible".

E. Equipment and supplies

45. There is considerable evidence that in recent years executing agencies have taken an increasing interest in problems associated with equipment and supplies. Some of the matters that have come under closer scrutiny are as follows:

(a) Physical handling of imports

46. In the past there have been reports of mishandling of imports of equipment and supplies such as being left out on the docks for extended periods of time. While in India last fall I made a rather intensive examination of this whole matter, reviewing files, talking to the project managers of sixteen Special Fund projects about their experience in importing equipment, and visiting Bombay where most of the imports are received for forwarding to project sites. It became clear that these imports of equipment and supplies have been brought under good control, and the reporting systems to agency headquarters for verifying receipt of equipment are adequate. Later discussion about equipment at agency headquarters indicated that in general the physical handling aspects of the problem were under reasonable control, but I can only report positively about India where I had the benefit of first-hand observations.

(b) Rationale for equipment

47. The usual rationale for equipment in the past has been for "training purposes". In practice, however, the criterion has tended to be the foreign exchange costs of equipment required for a UN supported project, whether or not the equipment was only for training purposes. Observations particularly in semi-developed countries indicate that as the need for UN

experts starts to decline there is mounting pressure for projects almost wholly oriented towards the importation of machinery. "If we must take an expert or two to make it legal, O.K., but we want your equipment and not your advice". Several examples were noted in agency headquarters of equipment procurement whose price included an additional amount for installation and demonstration of its use by an employee of the equipment supplier. It was found that this arrangement was much cheaper than to hire a UN expert on a short-term basis to train locals in the use of the equipment. The usual prompt arrival of the factory expert is much to be preferred over the customary long delay in getting a UN expert on the job, and the factory employee often knows a lot more about the particular equipment involved.

48. Both in the field and at agency headquarters this Inspector heard a lot about the propensity in some countries "to look through manufacturers' catalogues, pick out the most highly sophisticated and expensive item and insist on it for the project". One procurement officer referred to a scientific instrument with which a certain country official insisted on being supplied "even though there were probably not more than half a dozen scientists in the whole world capable of using it properly". If the agency objected to procurement of such advanced equipment, it was often accused of trying to restrict the developing country to equipment already considered obsolete in advanced countries. Considerable evidence was found in countries visited that the pressure on UN agencies to provide this highly sophisticated equipment resulted from restriction on the use of the local government funds to equipment of the types manufactured or capable of being maintained locally. Such restrictions on some kinds of widely used equipment can be of major importance in laying the groundwork for expansion of import-saving industries.

49. General agreement was found among agency officials that equipment should not be provided primarily for balance-of-payments reasons. Considerable support was found, however, for increasing the percentage that equipment represented of the total cost of a project. Also, several persons expressed the view that the time had come to focus on helping the government mobilize its own resources for manufacturing equipment for UN sponsored projects and only import equipment after it was determined that locally-made equipment was not available. These persons felt strongly that the level of sophistication of UN projects should usually be adjusted to the level of sophistication of equipment currently being manufactured in semi-developed countries.

(c) Maintenance

50. About a third of the specialized agencies are now assisting certain developing countries to make a start in establishing maintenance and repair facilities for vehicles, machinery and scientific equipment. In addition, a review of Special Fund projects in certain countries revealed that in some cases (particularly engineering-type projects) provision was made in the original Plan of Operations for maintenance of equipment for the project, or such provision was added later as experience proved it to be necessary. These efforts are commendable but scarcely scratch the surface of the broad problem of preventive maintenance and repair in developing countries. Several officials in agency headquarters felt that surveys, particularly in semi-developed countries, would reveal surprisingly large amounts of maintenance and repair facilities in both government and private activities which, if properly organized, could lead to much progress in meeting maintenance and repair needs with a minimum of foreign exchange costs.

(d) Status reports

51. Checks in the field indicate that UN agencies have efficient procedures for checking on the deliveries of equipment to project sites. A list of equipment that was purchased by headquarters is sent to the expert or project manager in the field for verification against items actually received. However, there does not appear to be an efficient follow-up system for reporting on the utilization of the equipment during the life of the project.
52. Isolated examples were noted in the field of efforts to determine whether equipment was used or not, but evidence was not found of widespread use of periodic reports to keep agency headquarters informed on this matter. What is considered necessary is a periodic report indicating whether equipment purchased for the project is being used, and if not why not. For example, it may be that no one knows how to operate a machine, or it needs spare parts, or the wrong item was purchased, etc. One isolated attempt was noted in the field to determine the degree to which the equipment was utilized. This involves a highly subjective judgement as to what is meant by "fully utilized". At this stage it would seem to be more appropriate to find out only whether the equipment was in use, and if not why not.

(e) Spare parts

53. The question as to whether spare parts should be ordered "direct" in the field, or through headquarters, was explored both in the field and several agency headquarters. There was general agreement that if the spare parts were available in the recipient country, it was more efficient to authorize agency experts and project managers in the field to purchase the items direct up to a ceiling amount per item. However,

if the spare parts had to be purchased from the factory outside the country, experience indicated that the assumed large savings in time if such purchases could be made direct to the factory by field employees were not realized. At least most of the frustrations in trying to get quick deliveries were present regardless of whether the order was placed in the field or at headquarters. One large UN agency collected interesting data showing that if the field purchased spare parts "direct" from the factory there would be a surprisingly large drop in cable traffic between headquarters and the field. Officials in one agency also conceded that procurement orders placed with the factory directly from the field might result in slightly faster deliveries on the average, because the purchasers in the field with fewer orders to worry about and with a stronger personal interest in getting specific equipment back in use, would probably make more follow-up enquiries at the factory.

54. Although hard facts were not available, it seemed reasonable to conclude at this time that a really strong case can be made only for direct purchase of spare parts from suppliers located within the country, but that the advantage of direct purchase outside the country might be worth further exploration.

(f) Centralized procurement

55. None of the UN agency headquarters were enthusiastic about the idea of more centralized procurement within the UN family, even of such standardized items as typewriters. Some interest was shown in the problem of standardization and the headaches resulting from trying to use a maximum amount of non-convertible currencies available for technical assistance. Except in a couple of instances, none of the agencies seemed to be in the mood to do anything about it.

56. It is this Inspector's view that the developing countries have a right to expect something better than the present unco-ordinated procurement of the UN family and bilateral programmes which resulted, for example, in the Ministry of Health in one country visited having 43 different kinds of vehicles. Perhaps more centralized procurement is not the best answer, but it is time someone took a broad look at this whole problem and came up with a workable proposal based squarely on the situation existing in developing countries.

(g) Labour-intensive technologies

57. Since the end of World War II, success stories have been reported from time to time about experts of the UN family or bilateral programmes who have made simple but dramatic improvements in traditional ways of pumping water, building houses, cultivating land, and the like. These improvements have continued the labour-intensive approach of the traditional methods, and involved very small capital outlays. The equipment, however, imported under the UN and other programmes has come from the more advanced countries and is based on capital-intensive technology. In other words, it is designed to meet the situation where labour is in comparatively short supply and the way to expand production was to use more capital-intensive means of production. The question was raised during visits to agency headquarters as to whether a concerted attack on technology would not be appropriate for the many developing countries with large labour surpluses, making full use of modern science, instead of continuing to import equipment designed for a radically different environment.
58. It is pointed out that there is no reason why technologies appropriate for whatever environment exists in a country cannot be developed. If a country has large surpluses of labour and a

serious balance-of-payments problem, development of "capital saving" rather than "labour-saving" equipment would appear to be of the utmost importance during the rest of this century.

59. The problems associated with the research, design, testing, manufacturing and marketing of "capital saving" equipment on a broad scale are so vast that it appears obvious that during the next two or three decades principal reliance would have to be placed on machinery manufacturers in advanced countries. So far the market for such equipment has been too small to be attractive to such manufacturers. However, I have seen estimates of manufacturing equipment required for developing countries running as high as \$10,000 million a year by 1975, of which about 25 per cent would be produced locally. In other words, the potential market may be large enough soon to induce manufacturers in advanced countries to really focus on this problem. Of particular significance is the development of efficient small scale manufacturing plants. For example, it is understood that some African nations are paying extremely high prices for cement. However, they cannot develop their own production efficiently because the typical European manufacturer has equipment only for cement plants designed to produce many times the annual output required by these countries.
60. What can the UII family do in the meantime? It seems obvious that in meetings, seminars, etc., on manufacturing technologies, proper recognition could be given to the importance of labour-intensive technologies. Furthermore, some focal point might be established to identify labour-intensive equipment now on the market, and to publicize results of studies of more labour-intensive technologies such as those by the Small Industry Extension Training Institute in Hyderabad,

India. The ILO is becoming increasingly active in exploring various aspects of labour-intensive technology, holding regional meetings, and taking such constructive steps as issuing an interesting paper to its field staff last year on "progressive industrial technology for developing countries".

F. Modern Management Methods

61. It was very encouraging to note the expanding interest in and use of modern management tools in the various agency headquarters. Although the most dramatic evidence was the increased use of computers, the interest shown was much broader, more professionally trained administrative experts were being recruited, and organizational changes had been made to focus greater attention on sound management.

62. As one indication of the broadening scope of interest, the following are the topics covered in the training course for country representatives of one of the larger UN agencies:

1. Management analysis and planning;
2. Principles of management;
3. Introduction to electronic data processing;
4. Computer application;
5. Systems analysis and systems design;
6. Network analysis, or the ABC's of PERT;
7. Operations research or quantitative analysis;
8. Information techniques - microform;
9. Management information systems;
10. Planning programming budgeting systems.

63. From the standpoint of problems noted in the field, it was particularly interesting to learn about the plans of three of the larger UN agencies to apply systems analysis and network techniques to the planning and implementation of Special Fund projects, and perhaps later to the more complex Regular and TA projects. These three agencies appeared to have carried out their

studies and plans independently, but the general approach had a number of points in common.

G. Network Planning

64. It is my impression that these agencies were working towards approximately the following approach to planning and implementing Special Fund projects.

(a) When a country indicates an interest in a Special Fund project, the prospective executing agency would send one or more experts to the country to study the request; and, if it were considered sound, would help local officials draft a proposed request to UNDP headquarters.

(b) Using the network approach, the basic objectives of the project proposed would be broken down into discrete sub-objectives, not exceeding perhaps ten or twelve, which in turn would be translated into specific tasks.

(c) These major tasks would then be listed on a sheet of paper, the estimated time required to complete each task and the order in which they must be completed would be noted, and an attempt would be made to reach agreement with government officials as to just who would be responsible for carrying out each task. These are the basic data required for a project, and can be conveniently listed on a single sheet of paper.

(d) A simple network diagram can then be drawn from the above data (even by a person with only a few hours of training in this technique). The longest path through the network (called the Critical Path) can be readily determined, and provides a reasonable guess as to the total time required to complete the project after it is declared operational. Experts in this technique point out that at this stage it is very important to study the picture provided by this diagram, visualizing the different steps in sequence, in order to ensure that no major task

necessary to achieve the objectives has been omitted. Also, if the Critical Path is much longer than the other paths, there may be important opportunities to shift personnel and facilities from other tasks to the tasks included in the longest path in order to reduce the total time (and cost) required to complete the project.

(e) The UNDP and local contributions necessary to carry out the major tasks identified above would be estimated.

(f) The project proposal would be completed and forwarded through the local UNDP Resident Representative to UNDP headquarters.

Note: An alternative approach would be to forward the project request to New York prior to making the summary network analysis described in (d) above, and then have New York headquarters forward the proposal to the agency headquarters for comment and application of the network technique. I prefer the first approach described above because the government will be committed in its request to the more refined data and the chances are reduced of having to reopen the discussion on tasks, length of project, etc., later in preparing the Plan of Operations.

(g) After the Special Fund project has been approved by the Governing Council and forwarded to the executing agency headquarters, the project manager would be recruited and sent to the country (i) to get a first-hand orientation in the local situation, and (ii) to make a careful check of the reasonableness of the estimated times required for carrying out those tasks assigned to the local government (as determined in step (c) above.) Experience indicates that a major weakness of SF projects in the past has been the over-optimism about the time required for the government to carry out those project tasks it performs.

(h) The project manager would return to agency headquarters and help draft the Plan of Operations. This would include the preparation of a more detailed network if the situation appeared to justify it. The trend is towards a detailed network initially only for the first phase, or early part of the project. The resulting draft Plan of Operations should be accepted by the government with fewer changes or discussion than in the past, because the submission to UNDP headquarters by the government included detailed discussion of the objectives and sub-objectives which could be lifted out and put into the Plan.

(i) After joint approval of the Plan of Operations with the government, key data would be coded and the project manager would report monthly on the Plan on an exception basis. If there were a large number of tasks (some say over 40, others over 100), the data probably should be put in the computer.

65. Discussions at agency headquarters recorded a wide range of views regarding the use of the network technique. Some favoured it almost without reservation. Others favoured the use of the network technique, but emphasized that experience showed that Operations Research and related techniques that ten years ago were going to provide all the answers are now recognized as having important limitations, and are effective only in the hands of competent managers. They prefer proceeding cautiously and learning to adapt this tool to the technical assistance programme environment. Finally, there are some who are greatly concerned over the uncertainties of recruitment, of the unpredictability of projects employing largely untested new techniques, etc., and prefer to stay on the sidelines at the moment and see how it works out with others. No agency was found, however, that rejected the whole idea.

66. It is this Inspector's view that a solid case can be made for adopting the above approach up to the point where the proposal is submitted to UNDP

headquarters by the government, (or the equivalent if the project is not financed by UNDP). Advantages are thought to be as follows:

- (a) Those preparing the project proposal are forced to think it through to the end, and thus the likelihood of over-looking important tasks is minimized;
- (b) A far better basis is provided for estimating the duration of the project, rather than assuming for example that all SF projects should be for five years as was the tendency in the past;
- (c) The conversion of the project proposal into a Plan of Operations will be greatly simplified: in fact much of the proposal could be transferred without change to the Plan if the two documents were properly co-ordinated;
- (d) The foundations would be laid for better control of time and costs after the project has been declared operational;
- (e) Only a minimum of special training would be required by those carrying out this pre-operational phase.
- (f) No special equipment such as computers is required.

67. It is the next stage -- the preparation of the Plan of Operations, and implementation -- where I have questions. If a detailed network with many sub-tasks is to be worked out, it is felt that this should be attempted only by agencies with a lot of computer experience, and even then be restricted to the first part of project implementation until the agency has had a considerable actual experience with this tool in an aid environment. Furthermore, the project supervisors in headquarters may find that they are rather swamped with computerized reports for which the action required is not clear.

68. More specifically, if a UN agency has reached the stage where it has established a separate management service with professionals who run a computer programme and have a considerable fund of knowledge about the use

of network techniques, then it is in a position to move rather quickly into a comprehensive use of the network approach for planning and implementing technical assistance projects. If it has not yet reached this point, then the pre-Plan of Operation steps outlined earlier could be adopted, but the further steps should be carried out only on a limited basis until the agency is fully competent to handle them.

H. Control of Regular and TA projects

69. It was observed in the field that there was little control over implementation or use of the results of many Regular and TA projects. The reasons for this situation appeared to be as follows:

(a) For most of these projects there was not even an agreed elementary work plan to serve as a basis of control over implementation. Part of the projects did have a description of the project and its component parts, but almost never a time-phased work programme. There can be no real control of a project if there is no programming of operations - merely the old technique of running around putting out fires after they get out of hand. I am not impressed with the practice of some UN agencies to send experts to the field with instructions to spend the first few weeks identifying what their job should be and writing it out for the benefit of their headquarters. This approach reflects a serious lack of technical assistance planning capability by the executing technical ministry, and its use helps to perpetuate this situation.

(b) When the project is finished, the usual approach has been for the expert to go back to headquarters to write his report, which eventually arrives in the country with no expert to explain it, and perhaps after any counter-parts associated with the project have left. It is difficult to reawaken interest and obtain action on the recommendations at that stage.

70. In discussing the above situation at agency headquarters, general agree-

ment was reached that it was desirable to have the expert or project manager discuss his findings with government officials and attempt to get agreement on action to be taken before he left the country. This was regarded as feasible for longer-term projects, but for those ranging up to six months it was considered difficult to clear recommendations with headquarters and then with the government before the expert left.

71. There was less support for the proposal that each project should have at least an Abbreviated Plan of Operations with a time-phased work plan agreed to by the executing ministry. This attitude seemed to be associated with the general attitude towards the rationale for Regular and TA projects. The main idea seems to be simply to send an expert for an indeterminate period, rather than to achieve a proper co-ordination of expert, equipment, fellowships and training of counterparts, and establish a meaningful termination date. However, there was agreement that the new programming procedures for TA projects should help to correct this situation.

I. Recommendations

1. Technical assistance planning and control

Responsibility should be assigned in headquarters on a geographic basis for strengthening the capability of relevant technical ministries to plan and control their activities. This may involve:

- (a) discussions of the importance of such planning and control with ministry representatives in the field and at headquarters;
- (b) training technical assistance planners at headquarters;
- (c) joint preparation of technical assistance project proposals and plans of operation and work programmes for all SF, Regular and TA projects;
- (d) more specific guidance on such matters to regional offices and country representatives;
- (e) recruitment of UN experts for such purposes; and
- (f) initiation of research as necessary to fill in gaps in necessary know-how for technical assistance planning.

(See discussion on pages 8-21; 24-26; 31-32).

2. Future role of agencies in semi-developed countries

Three or four semi-developed countries should be selected for a special study in depth of an agency's future role in such areas. For example, it might be found appropriate to anticipate an early termination of nearly all UN projects, and a restriction of future activities to a long-term programme for assisting the technical ministries to keep up with latest developments; or that a number of ministries in semi-developed countries are ready and willing to engage in much more sophisticated technical assistance planning and control of their internal resources with the agency's help, which may lead to a new series of projects; or that the time has arrived in a number of countries to carry out research in those areas on problems unique to developing countries; and so on.

(See discussion on pages 8-10; 16-17).

3. Modern management methods

The service at headquarters which has central responsibility for improving management practices should be assigned responsibility for action on the following items:

(a) Field reports

Strengthening the usefulness of field reports to headquarters for Regular, TA and SF projects through inclusion of:

(i) Status of counterpart and fellowship training, oriented to implications for time-phased replacement of agency experts.

(see discussion on page 17);

(ii) Identification of all equipment above a specified value not in use, with explanation for non-use.

(see discussion on page 22);

(iii) Significant deviations from work schedule of projects, together with proposal corrective action.

(see discussion pages 26-31).

(b) Internal mobilization of resources

Introducing much more flexibility into the preparation and implementation of Plans of Operations to facilitate a choice between

(i) constructing new buildings or using present structures;

(ii) training counterparts at the site, or elsewhere in the country, or abroad, and

(iii) procurement of equipment within the country, or abroad.

(see discussion pages 7-8; 10-12; 20-21).

(c) Maintenance of equipment

Encouraging the technical ministries to develop a plan for mobilizing the country's internal resources for maintaining equipment in their field and offering to help them. Field

reports on the utilization of equipment (see recommendation 3(b) above) should be used to help guide these efforts. (See discussion page 21).

(d) Procurement standards

Encouraging the technical ministries to

- (i) establish procurement standards designed to control the number of different models of equipment imported; and
- (ii) develop a broad list of items for which it is feasible to restrict imports to the level of sophistication of items currently being manufactured in semi-developed countries, and thus help to lay the groundwork for an orderly expansion of import-saving industries. The list would of course include certain items such as very advanced equipment for drilling deep wells which are economically justifiable almost regardless of the comparative availability of capital and labour.

(See discussion pages 20-21; 24).

(e) Network planning

Adopting the use of the network analysis in preparing Special Fund proposals for approval by the Governing Council; but not to go beyond the use of "macro" network techniques in the implementation of SF projects unless the agency has a computer programme in operation run by professionals who have a considerable fund of knowledge about network technique.

(See discussion pages 26-31).

(f) Control of projects

Every project, whether financed with Regular, TA, SF, or other funds, should have in writing a specific objective, a time-phased work plan tying together the expert and any related equipment, fellowships, counterparts, and sub-contracts, and

a meaningful termination date. Wherever feasible, these work plans should be developed jointly with the executing ministry for the project. Assignments of experts, with relationships to training of locals and use of equipment so vague that no time-phased work plan is possible, and for which there is no meaningful termination date, should be terminated as soon as feasible or converted to an OPAS-type assignment if it meets the latter's criteria. An exception would be an expert who is recruited specifically to gather data for a SF project, but he should have a time-phased work plan.

(See discussion pages 31-32).

4. Country-identified projects

Where alternatives exist, strong preference should be given to the selection of country-identified projects, that is to say, projects which usually were started before a UN agency came into the picture to help, and which are strongly identified with the government, not a UN agency or individual expert.

(See discussion page 16).

5. Spare parts

Procurement by field offices of spare parts available in the recipient country should be authorized up to a specified amount per item; but procurement by field offices direct from manufacturers outside the country should be authorized only after careful field tests justifying such action.

(See discussion pages 22-23).

6. Project recommendations

Before any project is terminated, the major recommendations should be discussed by the senior project expert with government officials, and an attempt should be made to get commitments if possible for favourable action. Some exceptions to this procedure may be necessary for projects lasting no longer than a few weeks.

(See discussion pages 31-32).