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Final Report

**STRATEGIC PLANNING FOR SUSTAINABILITY:
An Internal Evaluation of NWFP-AU/TIPAN**

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Table of Contents

List of Figures	i
Executive Summary	ii
Project Evaluation Summary	iii
I. Introduction	1
1. The Nature of the TIPAN Project	1
2. The Nature of the Evaluation	1
II. Evaluation Methodology	3
1. Conceptual Basis of the Methodology	3
2. Application of the Methodology	5
2.1 Development of a Strategy	5
2.1-1 Diverging	5
2.1-2 Assimilating	7
2.1-3 Converging	8
2.1-4 Accomodating	9
2.2 Implementation of Strategy	11
2.2-1 Initiating Sub-System	11
2.2-2 Strategic Planning Sub-System	13
2.2-3 Sub-System to Incorporate Future/External into Decision Making	28
2.2-4 Sub-System to Monitor & Evaluate	28
2.2-5 Responsibility/Accountability Sub-System	28
2.2-6 Criteria for Proposal to Vice Chancellor	30
Evaluation Methodology Footnotes	31
III. External Factors and Assumptions	32
IV. Inputs	35
V. Outputs	37
1. Research	37
2. Teaching	40
2.1 Practical Training	40
2.2 Replication of Strategic Planning Process	42
2.3 Student Assessment Methods	43
2.4 Agricultural Textbooks	44
3. Outreach	45
3.1 Field Assistants Training	45
3.2 Publications	46

3.3	Mass Medis Technology	46
3.4	Strategic Planning to Increase Staff Support	47
4.	Administration and Governance	48
VI.	Project Purpose	50
VII.	Goals	52
VIII.	Beneficiaries	53
IX.	Lessons Learned	55
X.	Questions Arising	56
XI.	Appendices	
	A. List of Persons Contacted	
	B. NWFP-AU Team	
	C. "2010?" Exercise Results	
	D. "Four Strategies for Institutional Sustainability" & "Concepts Pertaining to the Role of Agricultural Universities"	
	E. S.W.O.T. Exercise Responses	
	F. Questionnaire Responses	
	G. "What" & "How" Responses	
	H. Training Allocations (TIPAN)	

List of Figures

Figure 1.	The Experiential Learning Model	p. 3
Figure 2.	Soft Systems Methodology	p. 4
Figure 3.	Overlapping Nature of Figs. 1 & 2	p. 4
Figure 4.	Dendrogram (Evaluation Team)	p. 6
Figure 5.	Conceptual Model	p. 10
Figure 6.	Initiating Sub-System	p. 12
Figure 7.	Strategic Planning Sub-system	p. 14
Figure 8.	Dendrogram (NWFP-AU Team)	p. 16
Figure 9.		p. 17
Figure 10.	S.W.O.T.	p. 21
Figure 11.	Decision & Replication Sub-System	p. 29
Figure 12.	TIPAN Project Components	p. 52

Executive Summary

An evaluation team, managed by The Pragma Corporation, conducted a four week internal evaluation of the Pakistan - Transformation and Integration of the Provincial Agricultural Network (TIPAN) Project for USAID/Islamabad in November and December 1989.

The Project Paper Amendment called for TIPAN's second evaluation at the start of Phase II of the project to be "conducted as an internal evaluation by three Evaluation Specialists working with...NWFP-AU administrators, faculty, and students...(to) assess the university's...institutional sustainability," to address the Amendment's performance objectives, and to determine how best to focus project activities. The evaluation team focused their efforts along these guidelines, with the additional objective of enhancing the prospects for sustainability by initiating a self-perpetuating, strategic planning process.

The evaluation methodology evolved out of the Strategic Planning Process developed at Hawkesbury Agricultural College and the University of Maryland International Development Management Center's work in the area of sustainability. The Team engaged in their own strategic planning process (following the Hawkesbury model) to develop their evaluation strategy. The evaluators conducted extensive interviews with University personnel (appendix A), and based on the information gained through these interviews, selected a group to participate in a five day strategic planning/internal evaluation workshop (participants listed in appendix B).

The outcomes of the internal evaluation which should be highlighted are the workshop participant's decision to develop a proposal for the formation of a sustainability group or think tank (to function in an advisory role), and the Vice-Chancellor's support of this plan.

As a result of the evaluation process a number of findings and conclusions were shared with the evaluation team as they relate to the questions in the Scope of Work. Many of the legal, organizational, and procedural preconditions for improving the NWFP-AU are now in place. Important work must still be done on such issues as completing the merger in a way that will encourage campus-station cooperation, providing a budget for campus research, and decentralizing financial and personnel administration. The evaluation team generated a number of questions pertaining to these and other issues identified during the evaluation process.

While working to improve the considerable groundwork laid in Phase I of the project the University Phase II must also begin to focus on performance in the University system and the process of implementing and sustaining improvements and change.

For a more detailed summary of the the evaluation please consult the Project Evaluation Summary.

Project Evaluation Summary (PES) - Part II

13. SUMMARY

Many of the preconditions for improving NWFP-AU are now in place. These are primarily of a legal, organizational, and procedural nature. They include the (partial) merger law, directorates for teaching, research and outreach, mechanisms for reviewing research proposals, guidelines for research reporting, a training plan, and the new semester system and academic calendar, among others. Important work must still be done on such issues as completing the merger in a way that will encourage rather than hinder campus-station cooperation, providing a budget for campus research, and decentralizing financial and personnel administration.

In addition to improving the considerable groundwork that has already been laid, the University must now focus more on performance. The low ratings that external reviewers gave NWFP research proposals reveal a need to improve the way staff think about their research. The minimal follow-through on the comprehensive review of research reflects low motivation or low writing skills or both. Outreach is still largely considered something to do when the Outreach Directorate calls, rather than a part of the normal duties of most AU staff. Faculty are using modern teaching tools and have benefitted from teaching workshops, but at this early stage it is not surprising that students give teaching a mixed review. A very hopeful sign is that some teachers are voluntarily adopting formal student evaluations of their teaching.

Except in teaching, TIPAN has not focused its assistance on performance. The major efforts have been on structure and process, as well as participant training. While work must continue on these, TIPAN should devote more of its assistance to performance in Phase II. In doing so, it must be sure to work with AU staff leaders in encouraging an outward-looking, future-oriented perspective in the University as a basis for sustainability.

14. EVALUATION METHODOLOGY

The Project Amendment (pp. 26-27) calls for TIPAN's second evaluation at the start of Phase II to be "conducted as an internal evaluation by three Evaluation Specialists working with ... NWFP-AU administrators, faculty and students ... [to] assess the university's ... institutional sustainability," to address the Amendment's performance objectives, and to determine how best to focus project activities. In fact, the mandate of the evaluation specialists went beyond traditional evaluation (internal or external) to include the charge of enhancing the prospects for sustainability by initiating a self-perpetuating, strategic planning process.

The strategic planning methodology is a learning process in which the facilitator leads people who are in a problematic situation through unstructured analysis so that they "let go" of their preconceived notions about the problem and how to solve it. This enables development of relevant concepts that give rise to new ways of thinking about the problematic situation. These, in turn, can be used to develop an action response to the situation.

At the outset, the evaluation specialists held interviews, read documents, and engaged in their own strategic planning process to develop a strategy that would yield a system to incorporate an activist/future-oriented perspective among the AU staff and students in developing university policies and operations. The NWFP-AU Team was selected with information gained from the interviews. They engaged in a five-day strategic planning workshop that led to a decision by the NWFP-AU Team to develop a proposal for the Vice-Chancellor to create an advisory body/think tank/sustainability group that would perpetuate the strategic planning process. When the Vice Chancellor met with the Team he clearly stated his need and desire for such a group. The group is preparing a proposal for the Vice Chancellor along these lines.

Internal evaluation was part of the above process, but it was placed firmly in the context of a forward-looking planning activity.

15. EXTERNAL FACTORS AND ASSUMPTIONS

Several important external factors have changed, and some key assumptions may not be valid. Government policy on the merger of the Provincial Research System into the University changed from one of complete merger to an incomplete one with station staff remaining under the Provincial personnel system. That change was lobbied for by station staff, most of whom are very unhappy with the merger. This contradicts the PP Logframe assumption that "merged station staff [will] respond positively to initiatives by AU's research program." The main problem is inconsistency in grades, which may hinder active collaboration between station and campus on joint research. Another external factor that has changed is government funding, which may have a serious effect on research station operations. An encouraging development, however, is that the disciplinary situation at the University has improved markedly in the last six months.

16. INPUTS

There are no serious problems with inputs, but the NWFP-AU staff did raise a number of related issues. Construction of new buildings is appreciated by AU staff, but there is grave concern about the heavy, additional burden they will place on recurrent costs and administrative personnel. Participant training is perhaps the most valued input. There are suggestions that additional expenditures to launch returned participants with computer and lab facilities would pay large dividends. There is a need to continue the Research Specialist TA position beyond its present expiration in February, 1990. The new TAs who will be assigned to subject areas must be models and stimuli for better performance by promoting a cross-functional (i.e., teaching, research, outreach and governance) rather than a segmented orientation. Short-term TAs may be valuable in advising on and stimulating action on recurrent costs, resource mobilization strategies, decentralization and the replication of the strategic planning process.

17. OUTPUTS

Research. -- From 1985 through 1987, the major effort was on structure, i.e., the legal and administrative framework, physical facilities, and budget. Accomplishments include the (partial) merger law, the Research Directorate, and new equipment. In 1988 a start was made on matters of process, i.e., mechanisms and guidelines for planning, implementing, reviewing, evaluating, and reporting. Peer review of project proposals was inaugurated, but had disappointing results that were exacerbated by budget cuts; a comprehensive review of past research was designed and commissioned to many authors, but the work was not forthcoming; and guidelines were developed for reporting research results. These are all in their infancy and will require further attention by AU staff and TA. The University, with TIPAN inputs, must now start to focus on improving performance in the research system to benefit from the structure and process that are and will be in place.

Teaching. -- NWFP-AU staff are beginning to pursue an interactive approach to teaching. There is increased concern about placing graduates, especially in the private sector. A recent IDS study on employment patterns of recent NWFP-AU graduates provides a basis for AU staff to understand emerging areas in both the public and private sectors, develop and assess curriculum and other educational programs, and build linkages with employers, alumni and others who can provide valuable feedback to NWFP-AU teachers and students. Student assessment methods can be modified to give students the opportunity to demonstrate competencies in practical skill areas. In addition, approximately ten agricultural textbooks will be written by Pakistani agriculturalists relative to Pakistani conditions.

Outreach. -- The Outreach Program has developed quickly since 1985. One of the most significant achievements has been the development of close working relations with the Extension Wing of the provincial government. A number of other functional linkages have been established, and programs have been planned and started. As the Outreach Program looks ahead to Phase II, the greatest challenge facing its further development is the effective involvement of the University staff. The continuing education division will need to involve University staff in training Field Assistants. Outreach will need to instruct University staff how to develop teaching videos. In addition, Outreach will need to involve University staff in program development and management decisions. The more Outreach stresses University staff involvement during Phase II, the more likely that the Outreach Program will be sustained as a fully integrated area of the University.

Administration. -- A training plan has been developed. Doing so entailed the massive initial task of assembling the first complete inventory of professional staff at stations and on campus along with all relevant information about their discipline, education, etc. Training slots were allocated proportionately across disciplines, with some modifications made by deans and directors. The campus is projected to get a total of 84 slots and the stations 65. There are still major difficulties with excessive centralization of decision making, and financial and personnel management. The Vice Chancellor is said to recognize that this is dysfunctional and to wish to decentralize. TIPAN may be able to assist him in this by providing short-term managerial TA. The Vice Chancellor's desire to decentralize decision making was evident in his strong endorsement of an advisory body as conceived in the strategic planning workshop.

18. PURPOSE

The Project Purpose and EOPS conditions describe a university that is outward-looking and future-oriented; a university whose education is valued by its students, whose graduates are valued by employers, and whose research is valued by farmers; and because of this, a university that will attract sufficient inputs to insure continued production of its outputs. In short, the Project Purpose describes a university that is sustainable.

AU staff clearly pointed out that NWFP-AU is far from achieving that Purpose. But the groundwork is being laid. During Phase I, many of the preconditions for improving the University were put in place. In Phase II, the AU administration and staff (from campus, from stations and from TIPAN) must work together to improve performance in order to draw maximum benefit from the new facilities, organizations, procedures, and training. If those benefits are to be sustainable, AU staff and administration must focus on their external environment and on the future. The process initiated at NWFP-AU in November, 1989, was designed with this in mind.

19. GOAL

Discussion of the primary project goal is not pertinent at this time. Although a number of important linkages have been established with outside client groups, virtually all of Phase I seems to have been directed toward internal changes in structures, and, to some extent, processes. It is unreasonable to expect to see impacts on NWFP agriculture. If evidence of those impacts is to be sought in the future, a preliminary step should be an evaluation of data sources. Standard national or provincial agricultural sample surveys are not well suited to providing evidence of project impacts. The secondary goal is to transform the agricultural technology transfer network of NWFP. Progress is being made toward this, as is discussed throughout this report.

20. BENEFICIARIES

The project is starting to benefit farmers and their families, especially in terms of Outreach activities in adaptive research and Farming Systems Research. The Division of Training/Continuing Education have held a number of workshops and other training activities, including travelling seminars for farmers, FVDB Female Field Assistant Training, and the Role of Women in FSR workshop. The District Chamber of Agriculture is proving to be a useful linkage for the university in terms of bringing farmers to the campus for learning purposes. Close working relations have been established with Division Extension personnel. From 1985 to 1987, research accomplishments included the (partial) merger law, the Research Directorate and new equipment. In 1988, peer review of project proposals was inaugurated, a comprehensive review of past research was designed, guidelines were developed for reporting research results, and a training plan was developed. From 1982 to 1987, an IDS study indicates that one-third of the graduates of NWFP-AU were unemployed; over ninety percent of employed graduates

were in the agriculture sector; and the place of employment was primarily in the NWFP. Also, more than 70 advanced degree participants have been trained in the U.S., and about 12 have returned with completed MS and PhD degrees.

21. UNPLANNED EFFECTS

Not pertinent at this time.

22. LESSONS LEARNED

The TIPAN Project was evaluated five years before its termination, sparking useful discussion and strategic planning. Institutional sustainability issues should not be saved for the end of the project. As applied during this internal evaluation, the Strategic Planning methodology developed at Hawkesbury complements the SCOPE Institutional Sustainability Conceptual Framework developed at the University of Maryland, and is an effective means of developing an awareness of the link between interactive strategy and institutional sustainability, an actual strategy, and commitment to it. The methodology requires analysts to plan with people rather than for them, and enables participants to learn how they can facilitate a similar process. To be effective as a strategic planning exercise, an internal evaluation must link analyses of the past and present situation to a vision of a preferred future and develop commitment to an action plan and approval of it by legitimizers. Two lessons emerge regarding potential threats to project success. For one, a project that makes major changes for other organizations is likely to meet resistance unless potential opponents of the project are allowed to participate in the planning process from early stages. Also, experience with projects that were not sustained inhibits commitment to subsequent projects, particularly when people who committed themselves were perceived as being adversely affected.

23. SPECIAL REMARKS OR COMMENTS

A review of the internal evaluation process and content gives rise to a number of questions which ~~might be useful~~ ^{could be} for focusing discussion about future decisions:

- o Can USAID counter the common and anxiety-provoking assumption encountered during the evaluation that the TIPAN Project will conclude in 1994?
- o Assuming a post-1994 Phase III, how will it differ in emphasis from Phase II?
- o What can be done to broaden the prevailing production-oriented mind-set about the mission of NWFP-AU? What are the implications of such a broadening for the balance of disciplines in the provision of Participant Training?
- o How can the curriculum be modified such that graduates develop competencies that more closely match the emerging needs of NWFP? More specifically:

- What needs to be done to produce graduates who are valued by the private sector?
 - What can be done to develop a more experiential learning and assessment process?
- o Has the University determined the primary function of Outreach? Is it, for example, a primarily service one (facilitating linkages between University and community such that teaching and research becomes, and is seen to become, more relevant) or a primarily program delivery role (assessing needs of clients and planning, delivering and evaluating programs to meet them)?
 - o Given the strained relations that now exist between research stations and campus, what can be done to recapture the intentions of the merger such that new ways of thinking about how to achieve those intentions are promoted?
 - o What, if anything, should be done to change the perceptions that there is an imbalance in TIPAN inputs between the campus and research stations in favor of the campus?
 - o What should be done so there is an immediate source of funds that can be tapped such that researchers whose projects were approved through the Technical Review process can be provided with the promised funds?
 - o How can the debilitating effect on operations of sudden and unexpected cuts in recurrent expenditure be avoided and/or anticipated?
 - o How should provision of Technical Assistance be adapted to:
 - Reflect the change from structure to process and performance-oriented phases of the project?
 - Promote a cross-functional (i.e., across teaching, research, outreach, governance) rather than a segmented orientation?
 - Promote an external and future-oriented perspective among faculty and students?
 - Broaden the prevailing production-oriented mind-set about the mission of the University?
 - o What is the most effective form of Technical Assistance (short-term and/or long-term) to facilitate the desired decentralized budgeting and reporting system for a uniform personnel system based on verification of performance?
 - o How can the strategic planning process initiated during the internal evaluation be replicated and expanded? Specifically:
 - What is the most appropriate form of Technical Assistance to foster this?
 - How can strategic planning initiatives be recognized and supported?

I. Introduction

1. The Nature of the TIPAN Project

The TIPAN Project is concerned with changing people's thinking. Specifically, TIPAN hopes to change the way staff of the NWFP-AU (on and off campus) think about their mission so that the University can become a dynamic force for improving agriculture and rural life in the Province. The preamble of the Project Paper warrants quoting in this regard:

The leading agricultural universities see themselves as real pilots of rural change. Their research programs are heavily weighted in favor of finding immediate and practical answers to the ... problems of the people around them. There is also a lively dialogue between scientists and farmers."

TIPAN of course must go beyond the thinking phase. It hopes to see changes in what the staff attempt to do and in how they do it. It provides resources (training, technical assistance, equipment, buildings) to facilitate the staff's efforts. However, the key is a change in thinking. AID's concern with this aspect of the Project has led to an "evaluation for sustainability" focused on how the staff see their mission, how this has changed with TIPAN, and how these changes are reflected in the kinds of activities the staff attempt to undertake.

2. The Nature of the Evaluation

AID has called for an evaluation with the following attributes:

"an internal evaluation using a participatory approach to involve a 'team' of NWFP-AU administrators, faculty and students ... The purpose of this second evaluation is to: (1) measure progress made toward the achievement of the Project purpose; (2) determine how best to focus the Project activities during the next period in order to achieve Project goals and maximize sustainability ..." [Delivery Order 10, p.2]

Three evaluation specialists were recruited to facilitate the participatory process, to "define the scope of questions to be raised in the process," and to "challenge the NWFP-AU Team to assess progress and make recommendations." [Ibid., pp. 11-12] Broad issues to be considered were "policy incentives, institutions, and management systems."

During the first two weeks, the evaluation specialists read documents and interviewed over 60 people (by the end of the evaluation, the total was over 80) to gain familiarity with many of the issues of concern to the personnel of the host institution, to the contractor, and to AID. This allowed the specialists to identify appropriate individuals for the NWFP-AU Team and to develop a strategy for a workshop that would use internal evaluation as part of strategic planning with the focus on sustainability. That workshop took place during the third week. The evaluation specialists set the general directions of the workshop at the outset, but specific

issues to be considered arose from the NWFP-AU Team, and the workshop itself evolved out of the directions (implicit or overt) in each day's sessions.

The NWFP-AU Team took a broad approach to evaluating the current state of the University in relation to the Team's vision of the future of the Province and the role they saw for the University in that future. The outcome of that assessment was their decision to develop a "Sustainability" Group that would serve to facilitate development of policies and operations that maximized the AU's ability to serve the needs of the Province and to be shaped by those needs. The NWFP-AU Team then identified specific tasks necessary for the creation of such a body, developed a plan for carrying them out, and presented the results of their deliberations to the Vice-Chancellor, the Deans, and to USAID. Subsequently, the evaluation experts reviewed the whole process at an open faculty meeting.

A critical characteristic of this process is that it places evaluation squarely in the context of planning, specifically, strategic planning that emphasizes the future vision of the university and the external environment. Equally important is the emphasis on making this evaluation truly internal. While some of the interpretations and suggestions of the three evaluation experts inevitably come through in the report, we try to keep this to a minimum by not diverging significantly from issues considered by the NWFP-AU Team and in other meetings with AU staff. In this process, evaluation is not something done to the university by outside agents primarily for the sake of measuring progress. Rather, it is something done by the university, by its own staff, primarily to serve as one input among others in a planning effort to move the university ahead. We hope that this process has strengthened the staff's sense of self determination in charting the university's future, that it has engendered a sense of ownership of the TIPAN Project, and that it has clarified the picture of TIPAN as just one part of a broader effort to improve NWFP-AU -- an effort that began before TIPAN and that must continue long after it.

The report chronicles the above process in order to explain and demonstrate this new approach to evaluation. It may be useful to NWFP-AU staff and administrators in their future strategic planning activities, and it may be useful to USAID for future evaluations. In addition, the reader needs to understand the process in order to appreciate the basis and context for what might otherwise seem like traditional evaluation reporting. The format of the document follows AID Handbook 3, however the issues covered and the emphasis they receive follow the process.

I. Evaluation Methodology

1. Conceptual Basis of the Methodology

The methodology used is based on two closely related models - the Experiential Learning Model as articulated by David Kolb,¹ and Soft Systems Methodology as developed by Peter Checkland and his colleagues at the University of Lancaster in the U.K.² The Faculty of Agriculture and Rural Development at the University of Western Sydney, (formerly Hawkesbury Agricultural College) has integrated and used these models in a range of settings.³ AID/PPC/CDIE applied the methodology to structure their Conference on Strategic Planning in Higher Agricultural Education at Reston, Virginia in October 1988.

For the purposes of this internal evaluation, the methodology was considered in the context of the need for an emphasis on strategic planning that emerged from the joint Indo-U.S. Impact Evaluation of the Indian Agricultural Universities⁴ and the SCOPE Conceptual Framework for Institutional Sustainability developed by AID/ANE/TR/ARD in cooperation with the University of Maryland International Development Management Center.⁵

The basic methodological issue for this internal evaluation is one of relating the Strategic Planning Process to the concern about the sustainability of developments at the NWFP Agricultural University.

The two models that underpin the Strategic Planning methodology are depicted in Figures 1 and 2.

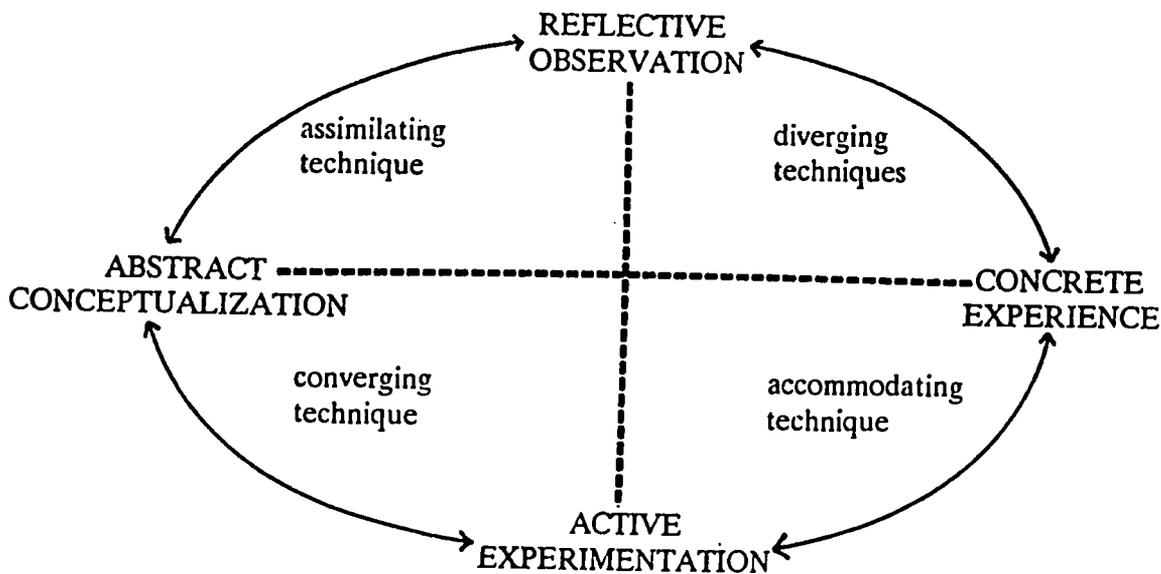


Figure 1. The Experiential Learning Model (after Kolb, 1984)

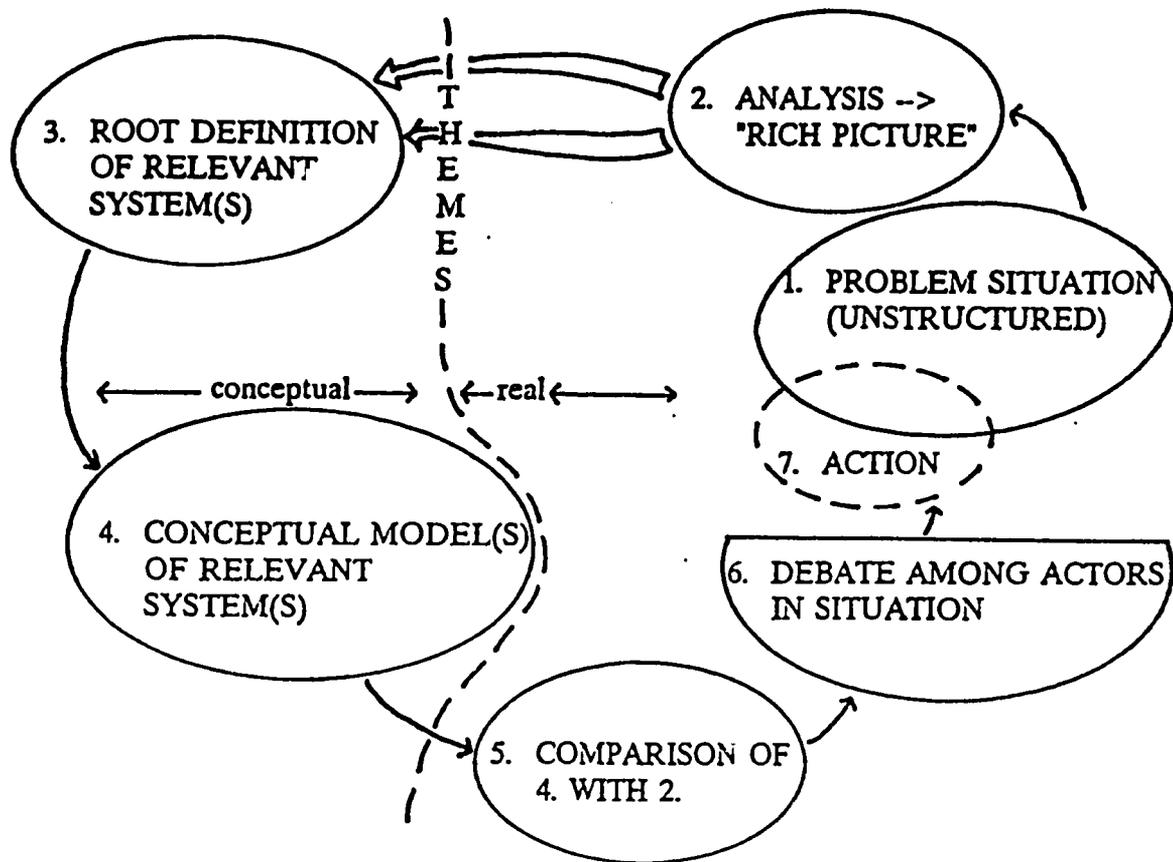


Figure 2. Soft Systems Methodology (after Checkland, 1981)

By superimposing one model on the other as in Figure 3, the similarity of their natures becomes apparent.

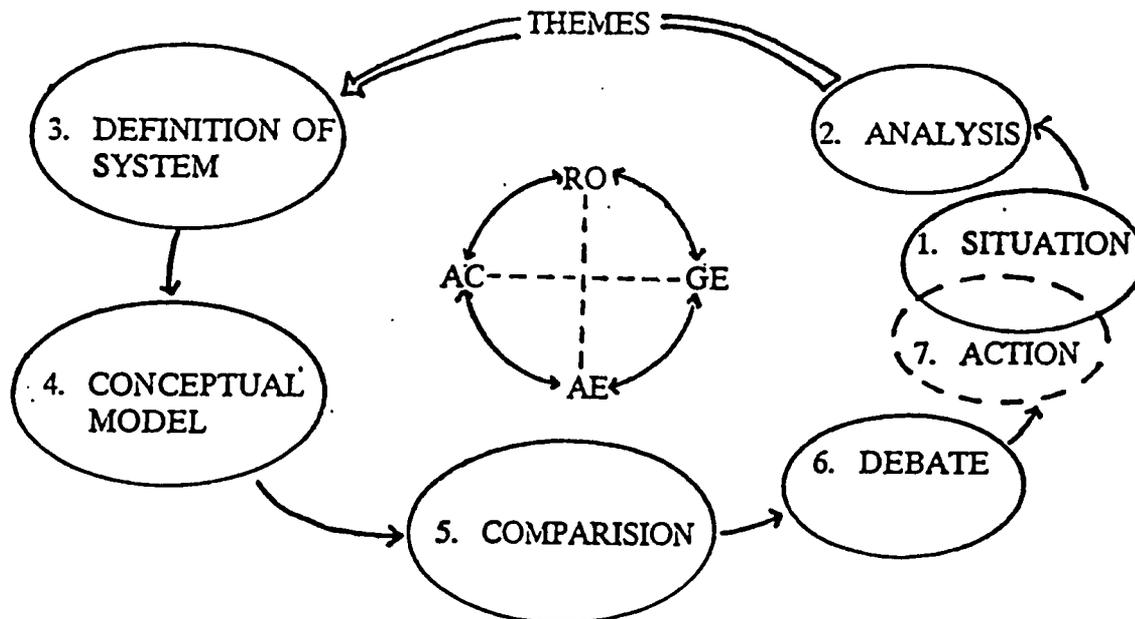


Figure 3. Overlapping nature of Experiential Learning and Soft Systems Methodology Models

In essence, the Strategic Planning methodology is a learning process in which the analyst/facilitator leads people in a problematic situation through a process of unstructured analysis such that they "let go" of their preconceived notions about the nature of the problem and how to solve it. This enables a consideration and development of relevant concepts which give rise to new ways of thinking about the problematic situation. This new thinking is then used to develop an action response to the problematic situation. The core of the methodology is (i) developing an awareness of the difference between concept and reality such that the former can be related to the latter, (ii) developing an awareness of the process among participants/problem owners, and (iii) facilitating an informed and holistic debate among the actors in the problem situation about desirable and possible ways to improve it.

2. Application of the Methodology

The methodology was applied in two phases during the internal evaluation. In the first phase the Evaluation Specialists used it to develop an evaluation strategy. Subsequently they applied it to structure the interaction between themselves and the workshop participants.

2.1 Development of a Strategy for the Internal Evaluation

2.1-1 Diverging. Analysis leading to a "Rich Picture" of the situation.

The Evaluation Specialists agreed at their first meeting in Peshawar on November 6, 1989 that they should spend the first two days in Peshawar interviewing people associated with the University to familiarize themselves with the situation and then hold a strategic planning session of their own on November 9 & 10 to develop a strategy. The Evaluation Team's strategic planning days coincided with a national holiday and the normal Friday closure.

The sessions began with the use of the dendrogram technique (also known as mind mapping or spider-diagramming) to diverge. The group placed at the center of the dendrogram "uncertainty about an effective evaluation strategy" as the problematic situation it faced and linked this to "confidence in our evaluation strategy" as the desired improvement in the situation.

Figure 4 illustrates the dendrogram that subsequently emerged. The awareness arising from reading reports and interviews in Islamabad and Peshawar influenced the content of the dendrogram.

The group began by quickly generating central elements pertaining to the evaluation strategy as the spokes of the dendrogram - aim, range of topics, data, report/final product, time, credibility of results, constraints on findings, needs of the rural sector, process, external environment, stakeholders, who we talk to, who we work with.

Over the next few hours the group branched out on these central ideas. The rules guiding this process are similar to those for brain-storming - if a participant believes something should be added, it is. There is no debate about inclusion of items, only their location on the diagram. The aim is to limit discussion of the significance of the material to a minimum and to concentrate on generating as wide a perspective and range of issues as possible.

2.1-2 Assimilating. Generating themes & developing root definitions of relevant systems.

To assimilate (draw patterns out of the material generated by the diverging and attribute meaning to them) the Team used colored pens to link related ideas, with the aim of drawing out themes and key elements of/for an effective strategy.

Three basic questions guided this process - who? what? and how?

Beginning with the question of "who we work with?" the team linked selection criteria (willingness, availability, capacity to participate, importance to aim) with the number and size of the group(s) with whom we work. This was in turn linked to aspects of the evaluation aim - to build capacity, an external orientation and future vision. Another aspect of aim was to switch ownership from TIPAN to University. The need to improve the research function was also discussed as was the issue of stakeholders.

"What to do?" led to a linking of the range of topics and their relationship to the Scope-of-Work and Project Paper Amendment. The need to build capacity was again highlighted as was the need to generate a sense of achievement for participants in the evaluation process. The needs of the rural sector and improved linkages such that the work of the University is related to these needs was also discussed at length.

A strong theme that began to emerge during the assimilation process was the need to focus the evaluation strategy such that it had the effect of developing an external and future-oriented strategic planning process within the University. When the diverging stage began, the team's preconception was with primary task concerns they had become aware of during the familiarization process of interviewing administrators and faculty (such as the problem associated with the merger of the University and the Provincial Research System). The process of divergence and assimilation raised the team's consciousness of underlying issue based themes, such as the need for an on-going strategic planning process.

Before moving on to the next stage the team went through a series of exercises to highlight the practical value of conscious application of our capacity to conceptualize. This was followed with an exercise on the technique of conceptual modelling as practiced in soft systems methodology.

The team then returned to the themes that emerged from the assimilation process and, using the C.A.T.W.O.E. technique from soft systems methodology, began to develop a root definition of a relevant system.

C.A.T.W.O.E. is a mnemonic which enables the analyst to incorporate key elements of the concept of a system into a process of transforming awareness (of a theme which emerges from

assimilation for example) into a workable definition of a system that is relevant to acting on the theme. The elements of the mnemonic are:

- C = Client(s) of the system
- A = Actor(s) - the person or persons who cause the transformation to occur
- T = Transformation - the process that transforms the inputs of the system into its outputs
- W = Worldview - the underlying set of values/attitudes/beliefs that gives the system meaning
- O = Owners - the person or persons who have the power to activate (or block) the system
- E = Environmental Constraints - the principal constraint acting on the system in its environment.

The team went through a number of interactions in using this technique, developing insights as it proceeded. The C.A.T.W.O.E. elements which seemed to capture these insights were:

- C = the faculty of the NWFP-AU
- A = leaders within the faculty
- T = to develop an external & forward looking perspective in deciding university policy and operations
- W = that the AU provides service and leadership to rural people of NWFP and enhances its sustainability by doing so
- O = the Vice Chancellor
- E = those elements in the situation which reinforce passivity.

2.1-3 Converging. Developing conceptual models and comparing them with the existing situation.

Arising from this process and subsequent insights is a definition of what the team saw as a system which had relevance in so far as it captured the essence of their analysis and offered promise for thinking about improvements in the situation. The system as defined:

A system to incorporate an activist and external/future oriented perspective among the AU staff & students in developing university policy and operations such that the AU provides service and leadership to the rural people of the NWFP. The system is to be activated by leaders within the institution, with the approval of the Vice Chancellor, in a way that takes into account those elements in the situation which reinforce passivity.

The team then individually listed their perceptions of the essential activities of the system, expressing them in verbs, in keeping with the technique of developing conceptual models.

Examples:

Team Member A	awakening winning spreading learning/broadening reinforcing/legitimizing
Team Member B	identify/select (group) solicit support (v.c.) explore (constraints) gather (data) talk (to clients) identify (starting point) refine (system)

Starting from this point a conceptual model emerged and was adapted in the light of subsequent insights into the form depicted in Figure 5.

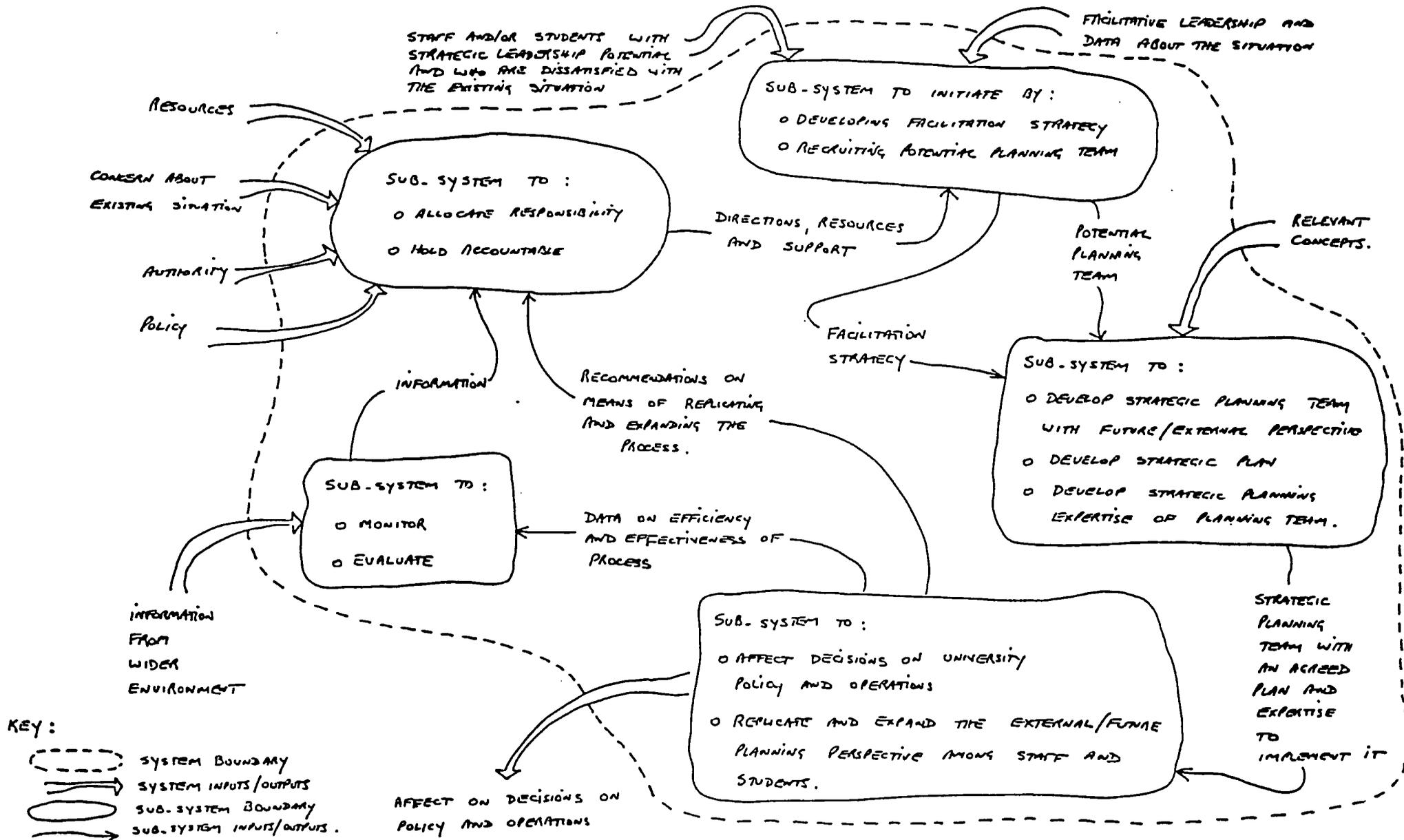
The team expanded three of the five sub-systems to a higher level of specificity because they were critical to the team's work (Figures 6, 7, and 11). Implicit in the model is the idea of replication. In the first cycle of the system the responsibility/accountability sub-system appoints the Evaluation Team to initiate and facilitate the strategic planning process. In a second cycle the Team assumes faculty members who participated in the process will be willing and able to play a similar role (i.e. initiating and facilitating the process for others). As subsequent cycles are initiated and completed the future/external perspective will spread and the pool of expertise will increase. The responsibility/accountability sub-system will play a key role in triggering and supporting this process.

2.1-4 Accommodating. Debate among actors in the situation about desirable and possible action.

The conceptual models emphasize what needs to be done, not how to do it. This is the greatest asset of the models as it is all too common for people to argue about how to do something without any shared understanding of what the action is supposed to achieve. The models provide both a discipline and a systemic overview of what needs to be done. This in turn allows a systematic exploration of the best way to carry out the function in the particular situation (the "how").

"How" the functions suggested by the models are carried out involves accommodating the reality of the situation. This topic is the substance of the next segment of the report, i.e. implementation of the strategy.

System to Incorporate an Activist and External/Future Oriented Perspective Among WFP-AU staff and students in developing university policy and operations such that the AU provides service and leadership to the rural people of the NWFP. The system to be activated by leaders within the institution, with the approval of the Vice Chancellor, and taking into account those elements in the situation which reinforce assivity.



2.2 Implementation of Strategy

The systems models created in the first phase of the methodology guided the emergence and implementation of an evaluation strategy and will be used to structure this section of the report. The sub-system for allocating responsibility and holding accountable is taken for granted, USAID appointed the Evaluation Team and will hold it accountable. The Scope-of-Work makes it clear what is expected of the Team.

2.2-1 Initiating Sub-System (Figure 6)

Obtain needed approvals and support.

The approvals and support needed to carry out the evaluation were readily forthcoming. The team met with a large contingent of the staff at a meeting chaired by the Acting Vice Chancellor on arrival at the University and received a positive response when the Team Leader explained its intention to act as facilitators of an internal evaluation process. Any requests the Team subsequently made for information or meetings were graciously and promptly agreed to.

Form Initiating Team.

The Team itself had no difficulty in developing a common sense of purpose and quickly agreed on the idea of gathering as much information as it could about the University, while concurrently Developing their strategy on how to proceed with the internal evaluation.

Analyze situation.

Team members had read a number of background reports and perused more during the evaluation. The Evaluation Team conducted interviews on the campus with administrators, faculty, students, and TA staff; on the research stations (Tarnab, Pirsabak, Mardan) with research officers, and a deputation of support staff (Tarnab); with the University Grants Commission and USAID in Islamabad; and with senior figures in the Agriculture Development Association, Tobacco Board, Chamber of Agriculture, and an Agribusiness firm in Peshawar. A list of those consulted is found in Appendix A.

Recruit potential strategic planning team.

A question the team asked when it met with University staff and explained its aim of working intensively with an as yet to be determined number of people associated with the University in some as yet to be planned workshop format was "who do you think we should talk to?" In nearly all cases the team was able to meet with the people nominated. Based on its own perceptions and frequency of mentions by peers and supervisors a picture of the composition of an appropriate group to work with began to emerge within the Team.

This process was complemented by the clarifying of ideas about the nature of a NWFP-AU Team that emerged from the first phase of the methodology (see 2.1) and an appreciation of the time constraints. The staff who agreed to work with the Evaluation Team are listed in Appendix B. A number of staff declined because of other commitments but response to being invited was universally positive.

Sub-system to initiate the planning process by recruiting a potential staff and/or student strategic planning team and developing a facilitation strategy. The initiators to have the needed facilitation skills and be appointed by the relevant responsibility/accountability body.

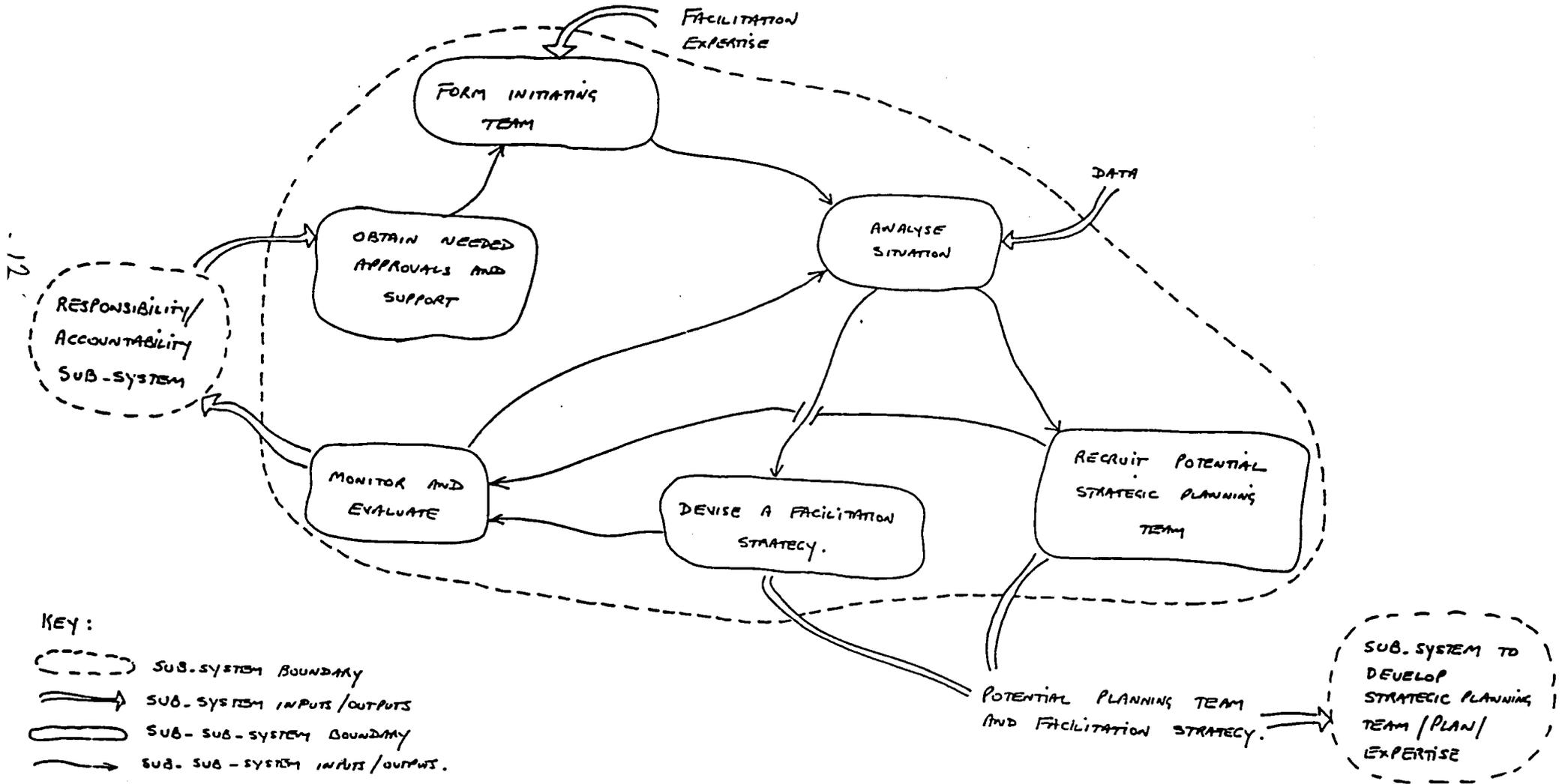


Figure 6

Devise a facilitation strategy.

The process of developing the conceptual models in phase one of the methodology gave the team a sense of strategy which went beyond the time it would actually be involved, and enabled it to see how the work it had already done, the workshop it now planned to conduct, and the report it would write could complement each other and fit into the strategy.

The sub-system "to develop a...strategic planning team...action plan...expertise" guided the process of designing and conducting the workshop with the NWFP-AU Team held between 9 a.m. and 12:00 p.m. on five consecutive days from 18-22 November. The Team met the night before each session to review and plan, and used the models as an aid to decision making.

2.2-2 Strategic Planning Sub-System (Figure 7)

The workshop was held in a complex of rooms in the Outreach section. The suitability of these rooms and the care the staff of the section took to welcome and ensure the comfort of the participants was an important factor in the success of the workshop. There was also a good supply of cardboard posters, felt pens, and masking tape.

The NWFP-AU Team and the Evaluation Team sat in as near to circular configuration as the room allowed to symbolize the notion of parity. The workshop began with the Team Leader introducing himself and using a wall chart (Figure 1, section 2.1) to briefly explain the nature of the workshop. Each participant then introduced himself and voiced his expectations of the workshop. A notable feature of this was the frequency with which participants outlined their perception of "the problem" and how to solve it - with the rider that they expected the workshop to concentrate on this. The introductions took 35 minutes.

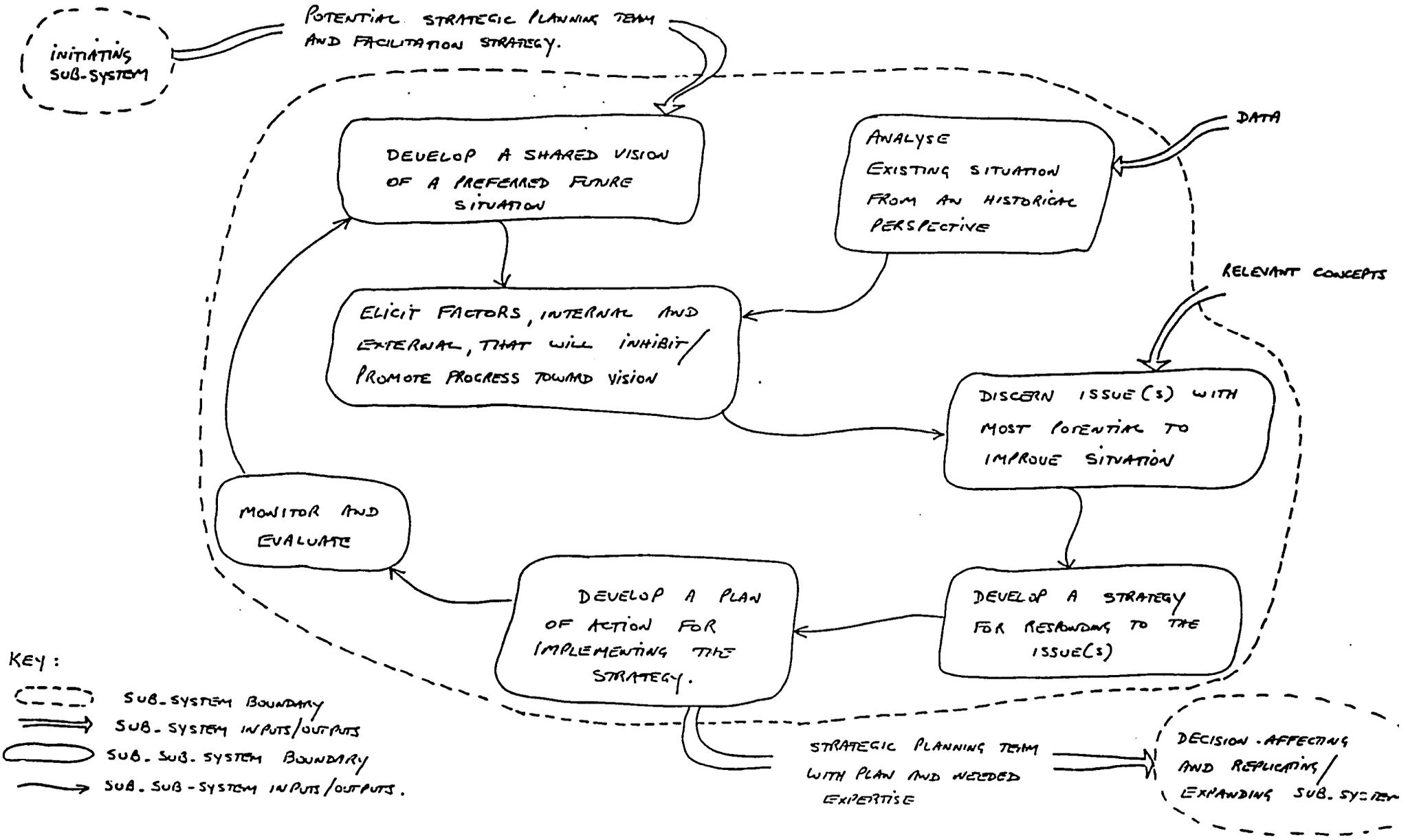
Analyze the situation, and, develop shared future vision of preferred future situation.

Activities that contributed to these two functions occurred throughout the workshop but were triggered by two diverging exercises introduced immediately after the introductions.

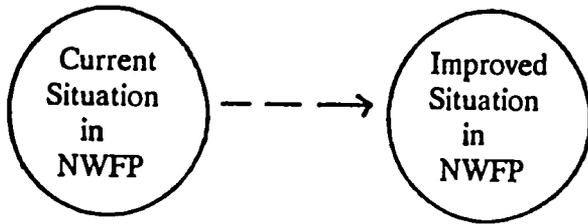
In the first exercise the NWFP-AU Team were asked to split into two groups and develop a response to the question "what will the NWFP be like in the year 2010?" The Team Leader briefly explained the nature of diverging and that the intention of the exercise was not only to begin this process, but also to begin developing a future and external orientation. Evaluation Team members acted as scribes for the groups and encouraged rapid-fire contributions. The groups reconvened after 35 minutes and posted the lists they had generated on the walls of the main room without any discussion about them. The lists are found in Appendix C.

The Team Leader then introduced the dendrogram technique by using the example of improving the performance of a football team and eliciting factors from participants which he incorporated into a dendrogram. The NWFP-AU team were again split into two groups (but

Sub-system to develop a staff and/or student strategic planning team with an agreed future/external oriented action plan and the expertise to facilitate its implementation. The development process to be facilitated by those with the necessary expertise and appointed by the relevant responsibility/accountability body.



with different membership) and were asked to develop dendrograms in response to the prompt:



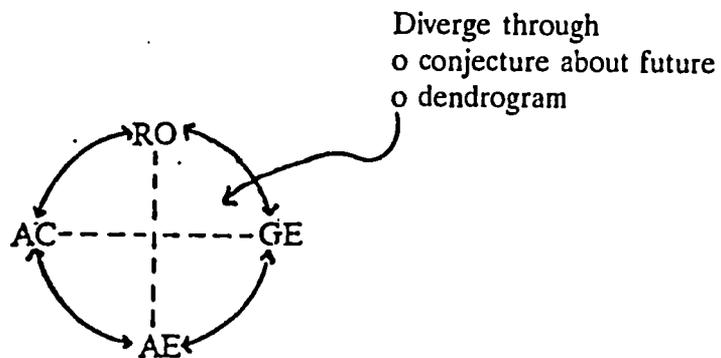
What ideas occur to you?

The groups spent about 50 minutes on this exercise, with Evaluation Team members again acting as scribes. The dendrograms produced by the groups are reproduced in Figures 8 and 9. The groups reconvened for a debriefing session and a number of questions arose:

- o what is the purpose of the workshop, is it to teach the group how to use the process? or to produce information/recommendations?
- o who will implement any recommendations made by the group?

A comment made by a participant that the exercises were valuable because they had never experienced them before closed the first session.

The second session, and all subsequent sessions, began with a review by the Team Leader of the previous day as it related to the Experiential Learning Model. This was followed by each participant sharing their reflections on the process and outcomes with the group. During the first session the emphasis was on diverging while developing an external and future oriented perspective. The reflections suggested participants were still focused on the issues they brought to the workshop - there was little comment on the process.



EMPHASIS ON DAY 1.

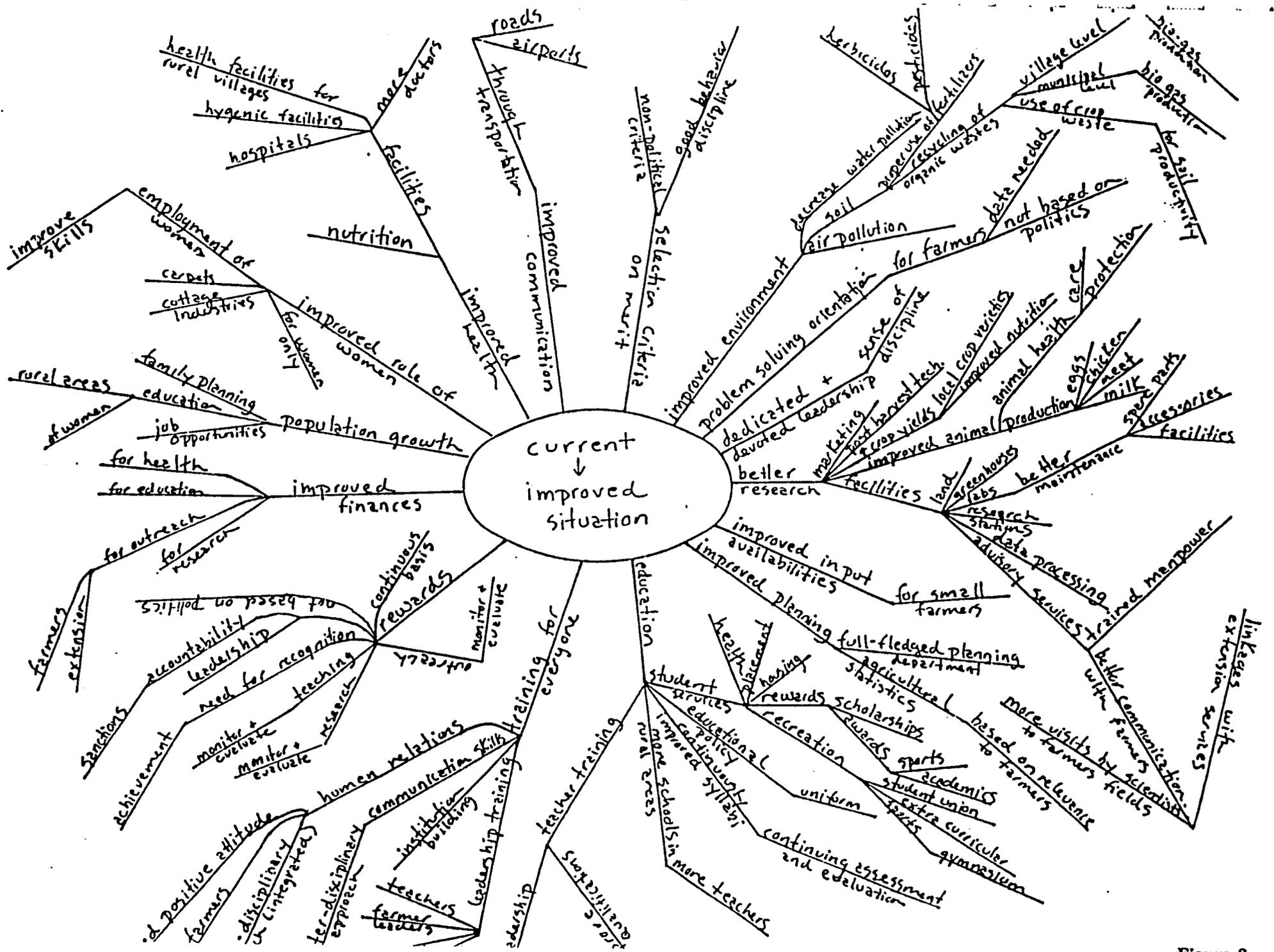


Figure 8

The team leader explained the term assimilation and used the football dendrogram created the previous day to illustrate the technique of linking issues on the dendrogram and discussing what the linkages meant. Two groups worked in this way for 55 minutes on the dendrograms they developed the day before. Evaluation Team members acted as scribes for the groups. The groups reconvened and the results were presented and discussed. The results are in Boxes 1 and 2.

Q: Based on the results of yesterday's divergence exercise, what issues generated by the group seem to be linked?

1. Education is linked to improving skills and transferring technology for employment of women; education to cope with population growth; improved finances for education; sense of discipline as a requisite for dedicated and devoted leadership; an improved environment; and, improved financing for education is linked to training for everyone.
2. Linkages with extension services is linked to advisory services for better research; trained manpower for better research; a problem-solving orientation; rewards for outreach; improved health facilities for nutrition; and improved health facilities for nutrition is linked to improved role of women.
3. Better research is linked to dedicated and devoted leadership; and, better research for animal production is linked to facilities for research.
4. Improved planning is linked to improved input availabilities; facilities for better research; and, a full-fledged planning department is linked to continuously improved syllabi.
5. Dedicated and devoted leadership is linked to merit system; better research; and leadership training.
6. Improved environment is linked to education; training for everyone; and, finances for research.
7. Improved communication is linked to improved input availabilities.

BOX 1. Assimilation Themes

Education: Of females; Literacy for the masses; Vocational training; For nutrition and health; Teaching; Students; Scientist conferences; Problem-oriented research.

Job Opportunities: Agri-business; Marketing; Leads to better nutrition and health; Agricultural legislation; AU alumni as source of jobs; Self-employment.

Production: Crops; Animals; Problem-oriented research; Farming systems research; Inputs; Merger; Credit: Legislation.

Information/Communication: Farmer societies; AU alumni; Extension/outreach; Producer-processor cooperation; Market information; Scientific conferences; Journals; Confidence in extension workers; Two-way communication with students.

Funding: From agri-business; from alumni; credit.

Practical Orientation: Problem-oriented research; Internships; Teaching; Training and continuing education; Students on stations; Students.

BOX 2. Assimilation Themes

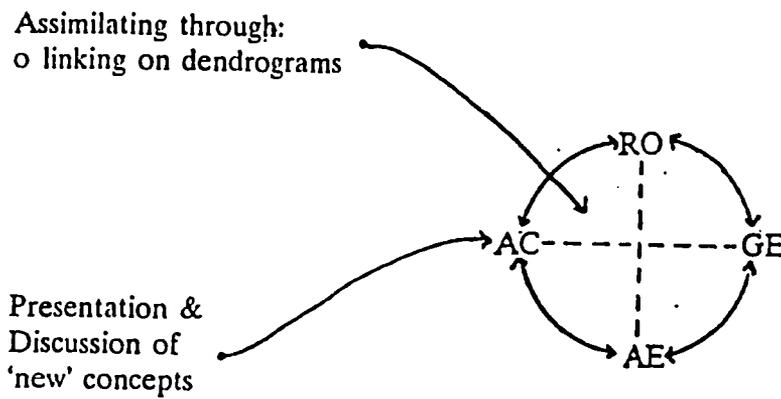
The discussion suggested that the participants were becoming frustrated with the process and were finding it difficult to see how the exercise would help them to solve the problems they had defined before the workshop. The Team Leader highlighted the importance of "letting go" of preconceived problem definitions and suggested that confusion and anxiety are often experienced as this happened. "If you are confused it is a good sign."

Introducing relevant concepts.

A central feature of the concept of experiential learning is the significance attached to the process of conceptualizing as a means of developing new ways of thinking about problematic situations. For this to be part of a methodology the analyst has to be able to distinguish between thinking about the actual situation and thinking about concepts that might be useful. People are often not aware of this distinction and can improve their effectiveness as a learner or problem-solver significantly if they become conscious of the difference and develop skill in conceptualizing. The Evaluation Team became very aware of this while working through phase one of the methodology and this was what enabled them to create the conceptual models, which they subsequently found very useful.

The Team's awareness of this phenomenon led them to conclude that at an opportune time they should introduce concepts which might help the NWFP-AU Team members make sense of the data generated through diverging, i.e. to add new elements of a purely conceptual nature to the data to be assimilated. The Evaluation Team believed this might result in new ways of thinking about the situation at NWFP-Au by workshop participants. The Evaluation Team prepared two brief concept papers the night before the second workshop session. They are included as Appendix D.

The papers presented by two of the Evaluation Team members generated lively discussions. The presentation and discussion lasted about one and one quarter hours.



EMPHASIS ON DAY 2.

Eliciting factors, internal and external, that will inhibit/promote progress toward vision of future. Although the activities planned for Day Three were aimed primarily at "eliciting factors..." the Evaluation Team expected they would also play a role in further developing "analysis of the current situation" and "development of a shared vision."

The session began with each participant in turn sharing their reflections on the process and outcomes. Compared with the previous day the responses were more reflective and focused on the workshop rather than "problems and solutions."

The Team Leader, after first explaining the stage he thought the workshop had reached relative to the Experiential Learning Model, suggested that today's activity would continue the assimilating process and begin the converging process. He added that he hoped the concepts presented the day before might be incorporated into the thinking of the group as the session unfolded.

The Team Leader then introduced the assimilating technique of S.W.O.T. Analysis and used the graphic in Figure 10 to explain it.



Figure 10. Strengths-Weaknesses-Opportunities-Threats.

The technique is based on the concept that an organization's sustainability is enhanced to the extent that it is meeting the needs of clients and stakeholders in its environment. Unless its outputs are meeting their needs the flow of inputs from the environment will diminish. With this as background the S.W.O.T. technique requires participants to reflect on and list what they see as the strengths and weaknesses of the organization and opportunities in its environment. Fifteen minutes were allowed for each participant to list strengths, weaknesses, opportunities, and threats privately. The NWFP-AU Team then formed two sub-groups and conducted S.W.O.T. analyses, beginning with a sharing of individual lists. Evaluation Team members deliberately stayed out of the groups. The Team thought that whereas their presence in the first two sessions helped in keeping the groups focused on the process that to continue in this role would inhibit the development of confidence and autonomy of the NWFP-AU Team. The groups worked in a highly animated way for 45 minutes.

The results of the S.W.O.T. analysis are in Appendix E. A noteworthy feature of one group is the predominance of weaknesses.

The Team Leader began a discussion of the results by emphasizing the value of concentrating on strengths and opportunities. He suggested the common tendency to concentrate on problems and weaknesses gives rise to negativism and an inward looking perspective and that this is at odds with the need to meet emerging needs in the environment - the route to sustainability. A number of examples of how the University might build on strengths to seize

opportunities were discussed, e.g. dedicated staff could further improve cooperative linkages (strengths) with an improved agro-industry (opportunity) to improve curriculum (weakness) such that more graduates were employed (threat) in agri-business.

Discern issue(s) with most potential to improve situation.

At this critical stage of the workshop a break from the commentary to give some background is appropriate. Explicit in the relevant system the Evaluation Team defined in phase one of the methodology is the idea of leaders within the NWFP-AU activating the process of developing an external and future orientation among staff and students. During the planning and review sessions the Team was aware of a number of tensions:

- o the tension that existed between the need to encourage the NWFP-AU Team to diverge and assimilate before converging (if new thinking was to come to the fore) and the concern that the NWFP-AU Team might become so frustrated with the apparent lack of progress in dealing with the "problems" they came with that they would withdraw, psychologically if not physically. They had no previous experience with the process and were accepting the Evaluation Team's facilitation on faith, but this might dissipate.
- o A second tension was that although the diverging, assimilating, and incorporation of new concepts might result in new thinking, the hold of previous patterns of thinking might be too strong and when it came time to converge the participants might fall back as far as deciding the "best" issue(s) to pursue - in which case the workshop would have little effect. Spending as much time as possible on diverging, assimilating, and conceptualizing acted as a counter to this but had to be balanced against a possible back-lash from rising frustration.
- o Another tension concerned the Evaluation Team's assumption about the NWFP-AU Team taking an active role in initiating and facilitating further cycles of the process. The Evaluation Team had not told them about this assumption when they invited them and the assumption might be misplaced and/or the Evaluation Team seen as manipulative.

The Evaluation Team decided in a review session after Day Two not to go ahead with the S.W.O.T. Analysis on Day Three because of anxiety caused by the first tension. Only after reflecting on the conceptual models and realizing the concern of the second tension might become a reality if more time were not spent assimilating did the Team Leader suggest the S.W.O.T. Analysis go ahead.

At the same review and planning session the Evaluation Team had pondered the issue of how to test the willingness of the NWFP-AU Team members to take a leadership role and discern what was in their minds concerning future action. The Evaluation Team used the C.A.T.W.O.E. technique to generate a brief questionnaire to present to the participants as a means of finding out. The questionnaire is in Box 3.

The commentary on the workshop is now taken up again at the S.W.O.T. Analysis stage. After the S.W.O.T. Analysis results, the Team Leader initiated a further discussion on leadership by referring to the commitment and dedication exhibited by many of the staff the Evaluation Team had interviewed and the Team's belief that this must be tapped and harnessed if the NWFP-AU is to become sustainable. One of the themes emerging from the discussion was that collective leadership was not the norm and what was suggested would require a change in attitude and behavior.

The Team Leader then presented the questionnaire (Box 3) and asked each participant to respond privately. This took 15 minutes. Each participant then shared their response to the questions with the whole group during the last 15 minutes of Session Three.

A goal implied in our discussions in the workshop is that the NWFP-AU will become an institution noted for its excellence in meeting, through its policy and operations, the emerging needs of the NWFP. For this to occur it must adopt an external and future oriented perspective such that it is aware of emerging needs and shapes its policy and operations to meet them.

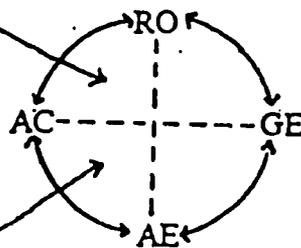
Assuming that the members of the group of leaders at this workshop can play an important role in helping to bring this about:

- o what do you imagine their aim to be?
- o why do you think this is desirable?
- o who will their activities be aimed at?
- o whose support and approval will they need?
- o what is the main constraint they will have to overcome?

BOX 3

Assimilating through:
S.W.O.T. Analysis

Beginning to
converge
through questionnaire



EMPHASIS ON DAY 3.

When the Evaluation Team examined the completed questionnaire at its review and planning session it concluded:

- o the NWFP-AU Team implicitly accepted that its members could play an important role in developing an external and future oriented perspective within the University; and
- o the NWFP-AU Team members could do this by working with people involved in or with the University.

The responses to the questionnaire are listed in Appendix F.

At the start of Session Four the Team Leader once again used the Experiential Learning Model to trace what had happened so far, and to suggest that today the group would move from assimilating to converge. In the sharing of reflections the participants were particularly positive in their comments on the S.W.O.T. Analysis technique, and expressed an awareness of the need for commitment if acting on strengths and opportunities were to overcome weaknesses and threats. The comments on Day Four were all reflective and workshop-oriented.

The Team Leader asked the participants if the Evaluation Team were correct in assuming from their reading of the questionnaires that the participants saw themselves as having an important role to play in moving the University forward. Each participant shared their unanimously positive reactions to this question with the group.

Developing a strategy for responding to the issue(s).

The Team Leader then introduced the idea of conceptualizing such that "what" needs to be done is identified before discussion of "how." Given that the issue now was how to transform the expressed interest of the group members into a group that could take effective action, he asked the essential "whats" that would have to occur. He nominated "define aim" as one that occurred to him and invited others to add to the list. After ten minutes discussion the group reached consensus on:

- o define aim
- o determine how to achieve aim
- o determine composition
- o get approval for mandate
- o enlist cooperation.

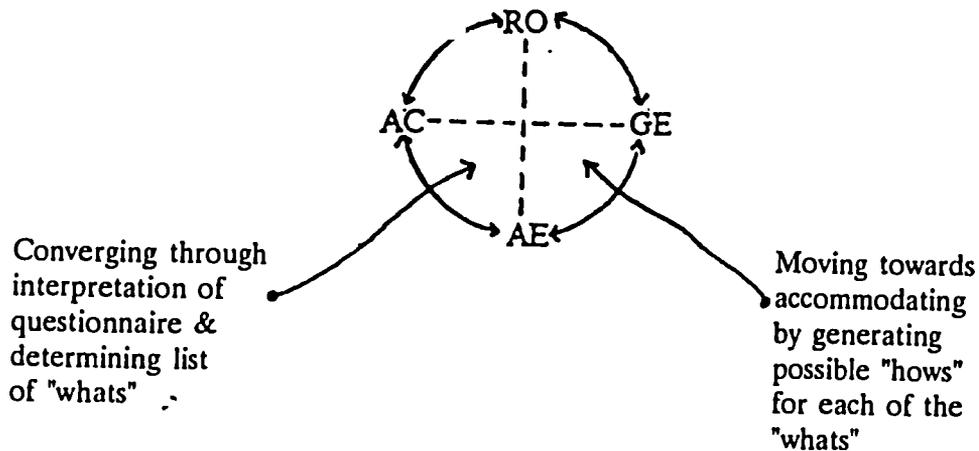
Participants were next asked to individually list their ideas on "how" to define the aim of the group and then share them. A composite list was generated. This took 15 minutes. The group followed the same process for each of the other "whats," i.e. composition, how to achieve aim, mandate, cooperation. The results of this process can be found in Appendix G.

In essence the aim of the proposed group is to make NWFP-AU more sustainable. The group could best help achieve this through assuming a consultative/facilitative role that developed consensus (and not by edict because of power to enforce decisions). Composition of the group should be broadly representative, but the question of how this should be achieved was not addressed. The qualities for group membership were

- o "Guts"
- o Leadership Skills
- o Good Communicators
- o Know how to evaluate (i.e. the process of this workshop)
- o Mission oriented
- o Dedicated
- o Committed
- o Not arguing for a particular group (i.e. lobbying)

The group unanimously agreed that the way to get approval for a mandate was from the University Syndicate through the Vice Chancellor.

The group spent one and a half hours defining "how" the essential "whats" could be achieved. The Team Leader in closing the session highlighted the fact that the group had now converged on an issue and developed a strategy for acting on it. He reminded the NWFP-AU Team that the Vice Chancellor, Deans, TA Advisors, and a USAID official from Islamabad would join the group at 11:00 a.m. the next day and this provided an opportunity communicate their ideas to key people.



EMPHASIS ON DAY 4.

Develop a plan of action for implementing the strategy.

As on the previous days the Team Leader began with a review of the groups progress through the experiential learning model followed by individual reflections on the process to date and the outcomes.

The Team Leader then posted the questions for the day regarding the "sustainability group":

- o How should the group organize itself?
- o Immediate and longer term activity?
- o Timetable?
- o Who authorizes, executes? Needs to be informed about each activity?

The group individually reflected on the first question and then shared their responses with the group. The overall emerging idea was the necessity to elect/select a group leader/"convener" and a secretary. The participants nominated candidates (after much discussion as to qualifications: availability, full participation in and understanding of the workshop and strategic planning/experiential learning process, representation from both on- & off-campus, etc), and by consensus decided upon Dr. Saiffulah Khattak from Tarnab as the chairperson/convener and Dr. Jehangir Khan Khalil from the campus as the secretary. This took one hour.

The idea emerging as the immediate task at hand for the formation of the group was the development of a proposal. The group nominated & selected Dr. Imran Khan, Dr. Mushtaq Mian, Dr. Habib ur Rehman, Dr. Mir Hatam, and Dr. Everett Eddington for this task. The proposal will be reviewed by all the workshop participants. The time frame discussed was that a draft be prepared by December 5 and a final by December 15.

At 10:45 the Team Leader turned the discussion towards the eminent arrival of the Vice Chancellor, Harry Dickherber from USAID/Islamabad, the Deans, and the TA Advisors, and how to most effectively utilize their time. The group asked the Team Leader to explain the process followed during the course of the workshop. Dr. Saifullah agreed to discuss the outcomes of the workshop/process, and the Team Leader suggested that in closure the participants individually share their reflections about the workshop and its outcomes.

The guests arrived between 11:00 and 11:10 and the session reconvened at 11:10. The Team Leader spent about 30 minutes explaining the process and related exercises and responded to questions and comments made by both the visitors and the NWFP-AU Team (participants). In doing this he traced the evolution of the workshop by referring to the workshop material generated at each stage and exhibited chronologically on the walls. Dr. Saifullah Khattak then discussed the outcomes of the process. To conclude the workshop the participants for a final time each shared their reflections on the process with the group.

In sharing their reflections the NWFP-AU Team emphasized that:

- o their initial expectation of a listing of problems and development of a list of recommendations on how to solve them (for someone else to implement) were not met; rather
- o the workshop had been an educative process with an appreciation of the nature and value of the process emerging as the workshop progressed, after an initial period of confusion and frustration;
- o all the data generated and conclusions reached were done by the NWFP-AU Team - the Evaluation Team had acted only as facilitators;
- o the logic of the Strategic Planning Process was clear and a number of participants said they intended to use it in their own situations (e.g. the class room);
- o the process engendered participation and ownership and this was important in developing the "human factor;" the process would be more beneficial if it were done during the initial planning of a Development Project, as well as that of subsequent phases;
- o the concepts introduced by the Evaluation Team (Appendix D) had been useful in highlighting the need for an interactive strategy and for evaluating the relevance of the University to emerging needs (or relation to concerns about environmental sustainability and marketing for example);
- o they were unanimous in their support for the sustainability group proposal as a means of furthering the work begun in the workshop.

The Vice Chancellor's response suggested that the NWFP-AU Team had succeeded in communicating their insights and enthusiasm. He said that he had felt the need for a group within the University which matched with what was being suggested and he would welcome a considered proposal.

The workshop finished at 12:30 p.m.

2.2-3 Sub-System to Incorporate a Future/External Orientation into Decision Making on Policy and Operations (Figure 11)

The NWFP-AU Team have targeted the Vice Chancellor as the decision maker they must communicate with about their proposal for a "Sustainability Group." They have nominated a sub-group to prepare a written draft proposal. They have now to clarify what action outcome they want and ensure the proposal and the way it is presented are likely to achieve this end (i.e. design appropriate tactics). At all stages of this process, including the presentation and the Vice Chancellor's initial response, they must monitor, evaluate, and adapt. The likelihood of the desired outcome will be enhanced if the NWFP-AU Team acts quickly, while the energy and interest generated by the workshop are high.

2.2-4 Sub-System to Monitor and Evaluate

The Evaluation Team did not amplify this or the Responsibility/Accountability sub-system to the level of specificity of the other three but they realize their effective functioning if the general strategy is to succeed.

One of the issues as far as monitoring and evaluating is concerned is one of monitoring the extent and degree to which a future and external orientation is being reflected in decisions on University policy and operations. Another is evaluating the effectiveness of various initiatives taken to generate this. The information that accrues as a result of this monitoring and evaluating needs them to be used in making decisions about subsequent initiatives - the province of the Responsibility/Accountability sub-system. The "Sustainability Group" may have a key role to play in this monitoring, evaluating, and advising process.

2.2-5 Sub-System to Allocate Responsibility and Hold Accountable

For the Evaluation Team's strategy concept to succeed the need for it has to be recognized and acted upon by those with the power to legitimize and sanction proposals. It was the exercise of this power that caused this internal evaluation to occur. For the replication and expansion of the process envisaged by the Evaluation Team to occur there must be an awareness of the need and a willingness and capacity to act on this by those with sanctioning and legitimizing power at various levels. The Evaluation Team is heartened by the high level of awareness expressed within the University, by the TA Team, and by USAID, and is confident this will be reflected in future decisions.

policy and operations and to expand and replicate the strategic planning process among faculty and students. The implementors to be drawn from those who have developed the needed expertise through participation in previous strategic-planning activities.

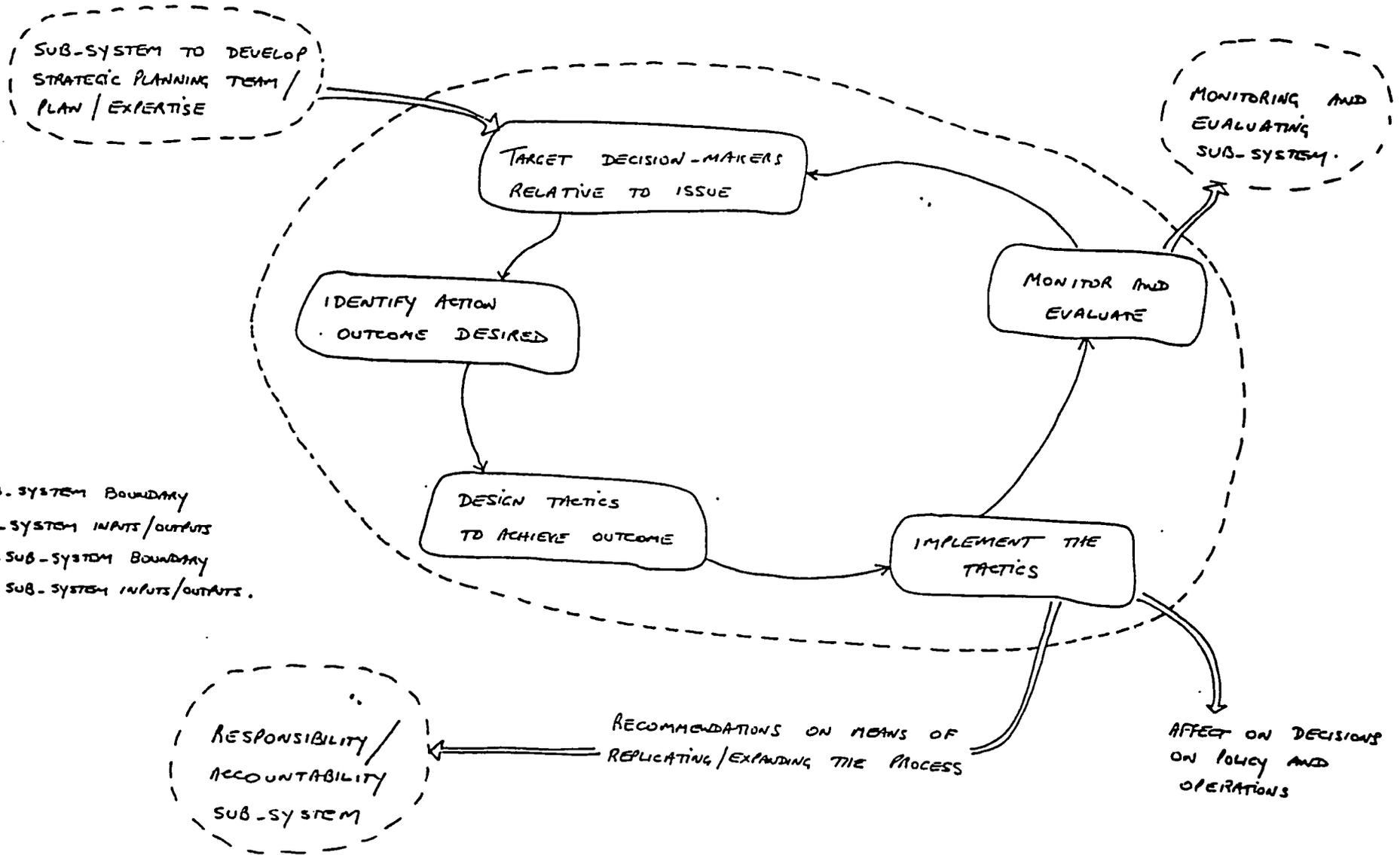


Figure 11.

2.2-6 Criteria for Proposal to Vice-Chancellor

Following the workshop the Evaluation Team discussed the task of developing a proposal to the Vice Chancellor with convener Dr. Saifullah Khattak and secretary Dr. Jehangir Khan Khalil. The Team agreed to develop a set of criteria the group might develop in drafting their proposal. The criteria are set out in the form of questions as follows:

Aim of "Sustainability Group:"

- o does it indicate what effect it is expected the group will have on the University?
- o does it indicate why this is needed and desirable?
- o does it define what the group means by "sustainability?"
- o does it indicate how the idea of a "Sustainability Group" fits into a strategy to enhance the long-term sustainability of the NWFP-AU?

How to Achieve Aim:

- o does it indicate the style of the group, e.g. formal? facilitative? coercive? catalytic? proactive?
- o does it outline how the group will be structured, i.e. the rules by which it will operate?
- o does it give specific examples of initiatives the group might take and define how these are related to the aim?
- o does it suggest how the insights and expertise into the strategic planning process gained by the workshop participants will be put into practice by the group?
- o does it indicate how the group can contribute to a climate within the University such that initiatives that are future/external oriented and/or will contribute to sustainability are recognized and supported?

Composition of Group:

- o does it specify the qualities members should have?
- o does it specify the number?
- o does it indicate stakeholders who should be represented and the rationale for their inclusion?
- o does it indicate how membership will be changed while still retaining continuity of commitment and a pool of the necessary expertise?

Gaining Support for Group:

- o does it indicate the stakeholders whose support is needed if the group is to operate effectively, and how the group will communicate with them & generate support?

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II. External Factors and Assumptions

A number of important external factors have changed in the last two years, and some key assumptions of the Project may no longer be valid. Some of these changes were noted repeatedly by the NWFP-AU Team and by many others during interviews. Most commonly cited was the policy change implicit in the amendment to the act that merged the AU with the Provincial Research System. This amendment, which was lobbied for by research station staff, keeps that staff under the rules and control of the Provincial civil service instead of transferring them to the University personnel system. This has the immediate effect of diminishing the University's ability to guide and control research through personnel actions. It has the longer-term effect of sharply differentiating the two staffs and perhaps making it more difficult than before for them to cooperate, although there is contrary evidence on the latter.

On November 21, 1989, the Vice Chancellor made a presentation to the Provincial Chief Minister, which included a request for merger of the two personnel systems, as had been contemplated at the start of TIPAN. If this request is granted, it will give the University additional control over agricultural research in the Province, but it will not automatically overcome the grievances of the station staff. Those very strong grievances contradict the PP Log Frame assumption that "merged research staff [will] respond positively to initiatives by AU's research program."

Station staff believe they will suffer in several ways under a unified personnel system. One set of issues revolves around fringe benefits. The details of this are hard to sort out in a brief mission, but three items arose repeatedly. One was pension benefits -- amount and transferability. Another was access to Provincial government loans for housing and other items -- loss of special access if shifted to the AU. The third was research allowances, which station staff receive but which campus staff do not. While a complete, thorough picture of gains and losses in fringe benefits may be hard to compile, it is clear that station staff believe that they will be monetarily worse off under the University's personnel code.

The inconsistency of service grades may present a more intractable problem and one that is more damaging to the hopes for research collaboration between the two staffs. At the stations and on campus we were told that advancement in grade is faster in the University system than in the Provincial system. The University has relatively more grades at the higher levels (18 and above), and at the highest levels the difference is absolute as well. Furthermore, it is easier for the University to add new positions at high grades. While this may benefit some station staff in the future, at present it means that many of them are in lower grades than many campus staff whom the station staff consider their peers or even their junior. Coming into a unified personnel system would thus, in some sense, put station staff "under" campus staff who are viewed as having equal or lesser qualifications. As one station staff member put it, "If they don't treat us on a par, how can we work with them?"

Relationships between the two staffs may also have suffered in the course of the effort to install a system of peer review for all research projects in 1989. By all accounts this was a well designed, rigorous, first effort. The Technical Review Committee and the Research TA devoted a great deal of time and energy to it. However, as with many innovations, there were

problems. Most proposals were not submitted until long after the announced deadline, thus delaying the whole process. The AU administration did not provide the promised secretarial and clerical help needed to process 157 proposals (139 from the stations and 18 from the campus). The position of Associate Director of Research, although established two years ago, has not been filled, and hence a potentially valuable administrative person is not on board to help.

In addition to these problems, the majority of proposals received very low ratings from the external experts (not on the AU staff) to whom they were sent for review. Rather than sacrifice quality standards in this inaugural effort, the Technical Review Committee approved only 30 proposals from the stations. Subsequent cuts in the Provincial research budget (Grant 19), which is administered by the AU under the merger, meant that only 18 of the 30 could be funded. Some of the disapproved proposals were returned to their Principal Investigators with a request for revisions based on the reviewers' comments. But the time lag and the budget cuts may negate this effort to encourage those station staff whose proposals were disapproved.

The negative impact this has had on station staff is not surprising. They blame the University and particularly the Technical Review Committee for delaying and then, in most cases, destroying their research programs for this year. As is evident above, assignment of blame is inappropriate, but the impact on station-campus relations is nonetheless real.

It is obviously impossible for an expatriate team visiting for a few weeks to gauge accurately the professional and personal relationships between scientists on the campus and on the stations. The above discussion reflects the many bitter expositions we heard from station staff. But this must be balanced by sentiments such as the following voiced by one station staff member and agreed to by others in the meeting: "We like the University, it's our alma mater." On the campus, one senior faculty member noted that all the station staff in one discipline were his former students, and thus it was very easy to work with them. Another faculty member pointed out that the two staffs had been cooperating before TIPAN and would continue to do so. A third campus faculty member, recently returned from training, said he had visited station staff in his specialty and they were eager to work with him. Joint proposals were being prepared for the Pakistan Agricultural Research Council (PARC).

Finally, the excellent cooperation between station and campus staff at the workshop last week is a cause for optimism. Particularly important was the shift from an initial atmosphere of charge and counter-charge to a desire to work together focusing on the system's strengths to overcome problems and pursue opportunities.

Another factor contributing to the station staff's discontent is their perception that the merger "came out of the blue," that no one consulted them, and that "it was forced on them as were other things in the time of martial law." According to one version that was repeated a number of times, the Provincial system was not part of the original TIPAN plan, but at a meeting between the Governor and USAID, the merger was born. The Project Paper lists six station staff who were consulted during the design. Four are in higher administration. We were able to inquire about the extent of consultation with one of them. We were told that he was asked to list his problems and needs. He did not feel the PP represented his ideas on the merger. It

is always hard to reconstruct past events. However it is clear that station staff do not feel they participated in the design process that led to the merger.

History is another important external factor bearing on how individuals perceive TIPAN. One staff member recounted the history that he considers relevant to the current project. In 1964/1965, the then Director General of the Provincial research system (or perhaps the Director of Tarnab) wanted to move Tarnab's operation to Peshawar University. The Government was in agreement until the University objected. About the same time an externally funded village development project was recruiting agriculturists out of government service. Those that went were better off temporarily but were worse off in the long run when the project ended and did not leave any sustainable structure in place. More recently, he observes that the USAID/Colorado State University project came and went and had no lasting effect. Is it any wonder that many people think the merger is just a brief, transient aberration?

Another staff member said that there is no historical precedent for a government unit being merged into a semi-autonomous unit like the University. The Project Paper presents a different opinion (p.117):

Merger of the provincial research system with the University is not expected to present any unusual problems. ... It is expected that the merger will require approximately one year to complete. During recent years, similar mergers ... have been accomplished in Pakistan. They include: merger of the Electricity Department with the Water and Power Development Authority; transfer of the National Health Laboratories to the National Institute of Health; and merger of the Ministry of Food, Agriculture and Cooperatives and the Pakistan Agricultural Research Council. These mergers will be examined to identify those elements that were critical to effecting the smooth transfer of staff and facilities as well as to identify the pitfalls to be avoided.

It would be interesting to review those studies of prior mergers to see whether any were indeed similar to what is being attempted with NWFP-AU.

Another external factor that has changed is government funding. Shortly before the internal evaluation began, a cut in recurrent funding for the Provincial agricultural research budget was announced. Directors and staff of research stations visited were concerned that this would have a serious effect on operations. Salary costs had to be met and a disproportionate cut in operating costs was inevitable.

Lack of discipline and party political influences were often mentioned as constraints, particularly as they affected the student body. An encouraging theme, however, is that the situation at NWFP-AU has improved markedly in the last six months. The Evaluation Team often heard statements to the effect that the situation at NWFP-AU is now relatively much better than on other Pakistan university campuses.

Unanticipated changes in senior personnel seem to have slowed some aspects of the Project. The Vice Chancellor resigned in the spring of 1989. The TIPAN Chief of Party died June 30, 1989. Their replacements are now on board and moving the Project ahead.

IV. Inputs

Neither the NWFP-AU Team that was assembled for the workshop nor other individuals interviewed spent much time discussing inputs. A number of points were noted briefly in several meetings. Most common was appreciation of external degree training, with the qualification that the station staff resent having been left behind in the early stages. They are waiting to see whether they will in fact get their fair share under Phase II.

The status of some recently returned participants was a cause of concern. Some recent returnees feel they do not have the opportunity to make use of their training because they lack a computer, lab facilities, and approval to teach courses in their specialty. On the other hand, some staff who have been back for several years or have never gone abroad for training think some recent returnees are spoiled and must adjust to the reality of Pakistan. The issue of adequately equipping returned participants is under discussion in several fora in the international donor community, and AID/Pakistan seems open to suggestions. They realize that it is silly to spend so much on a PhD program and then not spend a tiny fraction more (e.g., on more computers) to get fuller payoff from the investment.

New equipment is appreciated, but problems of quality, missing parts, and lack of service were raised, as they were in the first evaluation. In addition, there is the general perception that most of the equipment has gone to the campus, which causes resentment on the stations.

There was very little discussion of the TA Team. One staff member wanted TAs to work in the departments to provide good examples of teaching. Under Phase II the TAs will be assigned to subject areas, but it is not clear whether they will actively join in teaching and research or just advise on them.

A few staff members called for continuation of advisors to assist the Directors of Teaching, Research, and Outreach. This is already planned for teaching. We are not sure of plans for outreach, and the research advisor position is scheduled to end in early 1990. This latter seems especially unfortunate given the project's emphasis on integrated, problem-oriented research, and the highly problematic condition of research at present. A great deal of effort has been expended and a good foundation is being laid, but a great deal more must be done.

The desirability of short-term TA was raised in a number of contexts. Several individuals raised the possibility of using short-term TA to address the AU's organizational needs. Preliminary meetings have already been held with a firm that may be able to advise on administrative and financial matters. The issues that will loom larger during Phase II of the project are recurrent costs, resource mobilization strategies, and decentralization. A cost analysis of NWFP-AU undertaken by an independent team of Pakistani financial analysts and accountants would be particularly useful to the AU Administration. This study (or studies) would analytically distinguish between type of expenditure, budget and income, and project any recurrent cost gaps. Depending in part on the outcomes of this analysis, it may be desirable for NWFP-AU and USAID to design a Third Phase of the project to help the GOP and NWFP-AU build in the key financial and institutional requisites to sustain the investment made in NWFP-AU during the first two phases of the TIPAN Project.

Some faculty want subject matter specialists to visit to help keep AU staff up to date in their fields and to facilitate linkages with the international scientific community. One can envision a range of activities for such visiting experts -- a seminar series, formal short courses, individual advice on research, active collaboration in research, providing access to lab facilities in the US for certain analyses, identifying other scientists and centers working on related topics and helping to make connections, and providing an ongoing US contact for questions and literature.

Advisors of some of the returned participants might be appropriate for some of these short visits. Faculty from the Illinois group would be especially valuable because they have a long-term commitment to the AU that is likely to continue beyond the Project. The University of Illinois' Continuing Linkage Agreement with the University of Zambia is an example of such post-project commitment.

In addition to providing advice, short-term TA can become a stimulus for action. If the TAs are scheduled to return several times, and if they leave behind an approved plan of action, the host institution tends to feel a sense of urgency to carry out the plan before the next visit. In this sense, short-term TA may be a powerful supplement to a resident advisor working on the same issue. The latter would provide continuity and advice on implementation, as well as contributing to the identification and SOW of the short-termers.

The above rationale applies to the process set in motion by the current evaluation. Short-term TA should be scheduled within six months to help the planned "Sustainability" Group move forward.

The new buildings under construction are widely viewed in a positive light. However, the AU administration is understandably apprehensive about the large additional burden those buildings will put on recurrent costs and administrative staff.

V. Outputs

This section discusses outputs in four categories -- research, teaching, outreach, and administration.

1. Research

Any effort to improve agricultural research must deal with at least three components:

1. Structure (or infrastructure)
2. Process
3. Performance.

Structure refers to the legal and administrative framework, physical facilities, and budget. Process refers to mechanisms and guidelines for planning, implementing, reviewing, evaluating, and reporting. Performance refers to how well the structure and process are utilized and the quality of the resultant research.

From 1985 through 1987 the University and the TAs worked on structure. The first Research Specialist TA (Cragle) called this, "the heavy reorganization and adjustment period for the merged research program." [TIPAN Quarterly Report 87-1] In addition to dealing with legal and organizational issues, Cragle also worked with the Research Station Development and Management Specialist (Marion) on several tasks. Marion was concerned with issues like land shaping and irrigation on the University Farm, inventorying the equipment needs of the stations, and developing policies for facility use. Early Quarterly Reports mention peer reviews of research proposals, but we are unable to determine whether these were part of a broad, systematic effort to work on process and performance. It seems unlikely, given the other tasks with which Cragle and Marion were charged.

The work of the AU administrators and the TA Team in those early years resulted in the merger law and the Research Directorate. These are discussed in the first evaluation. (September, 1987)

In February, 1988, a new Research Specialist (Bond) joined the TA Team with a clear mandate to deal with process: to change the way the staff think about research, the way they plan for research, the way they cooperate across disciplines, the way they monitor and evaluate research, the way they report research, and the way they use prior results (their own and others) as a basis for future work. The following extracts from the 1988 Workplan for research spell out this mandate:

- o Organize a major effort to interpret the significance, value and relevance of past research. ... Emphasize importance of developing summaries, conclusions, and recommendations.
- o Develop long-term research plans. ... develop concepts and research priorities.

- o Advise on ... activation of Technical Review Committee. Work with TRC in evaluation of Kharif plan. ... Firm up procedures for initiating research projects.
- o Develop definitive format for the annual reporting of research results.
- o Begin the process of encouraging the publication of quality research in refereed technical journals.
- o Advise on systems, format, procedures for annual [research] evaluations. Encourage peer panels for promotion. Develop feedback systems.

Much of this (extremely ambitious) Workplan is reflected in the Project Outputs listed in the Project Amendment. Those outputs are said to have come from the April 4-5, 1989, meetings of AU and TIPAN staff on research, teaching, outreach, and administration. That list of outputs provides a useful way to organize this discussion of the research program.

"a. All research will be conducted in accordance with approved multi-year research project plans with earmarked funding for each project."

This is moving ahead with funding that the AU controls. Staff have to submit three-year research projects to the Technical Review Committee. The problems in the first year of that process are discussed above, but the process is in place and improvements should be seen in the future. Funding is earmarked for each project, and the principle investigators receive the money directly, rather than through the station Directors as in the past. A formula has been developed to allocate station-wide operating expenses and overhead to the Directors.

It should be noted that the stations receive other significant funding directly from the Province without any control from the AU. These are Annual Development Program funds. In recent years they have amounted to over twice as much for operational expenses (non-salary) as Grant 19 administered through the AU. Thus station work is guided more by funds controlled by the Province than by the University. One station Director took pains to note that ADP funds are not flexible. They must be used on only those projects for which they are designated.

"b. Research activities of the AU will be fully integrated, conducted by on- and off-campus faculty working together in multi-disciplinary teams."

Fewer than 10% of the 157 proposals submitted to the TRC had participation by both station and campus staff, and the typical range of disciplines was narrow. Social sciences were not represented at all. We do not have information on projects with other funding, e.g., directly from PARC.

"c. A long-term master research plan will be adopted for NWFP, and all research projects will be conducted under the umbrella of the plan."

The first step toward this output was the effort to review prior research, interpret it, and then decide on future directions. A Program Committee was formed, 23 papers were commissioned to a total of 84 authors, paper guidelines were developed and explained in visits to the stations

and on campus, and Rs 1000 was offered to each author. Three months after the deadline, only three drafts had been submitted. The long-term master research plan may have to be developed without this thorough review. PARC and the National Commission on Agriculture have developed priorities for NWFP agricultural research and development, respectively. These are fairly broad, but may provide a starting point. Indeed, it was mentioned that NWFP agriculturists had an input into those priorities.

"d. A uniform system of annual reporting of research results will be in place for all research conducted by staff of the University."

Reporting guidelines have been developed.

"e. A formal system will be in place for the review and processing of all manuscripts intended for publication."

We did not hear of such a system.

"f. On-campus staff will be charged with the responsibility of conducting their own research; and permanent funding and facilities will be provided to support on-campus based researchers."

Eighteen research proposals were submitted to the TRC by the campus faculty, with 14 coming from just two departments. No funding was provided by the AU for the approved projects. The TRC took the initiative of seeking external funding for those projects and met with some success. Campus funding for research is expected by staff and AID. The previous Vice Chancellor had verbally agreed to allocate a budget to research. Now that the new Vice Chancellor is in place, this issue should be reviewed and action should be taken.

"g. Graduate thesis research will be fully integrated into the research program with the total staff and facilities of the University made available to support graduate studies."

We were told of at least one large department in which graduate thesis research is integrated with faculty research.

One output (3g) listed under Integrated Programs in the Project Amendment is quite relevant to research:

"Personnel in all University Departments, Research Stations, Institutes, etc. will have responsibilities in research, outreach, and teaching."

As may be gathered from the above, this is far from a reality. However, there are many indications that staff see the value in split appointments, and there are many individuals on campus who teach and do research. Three former station members have transferred to the AU system and they also teach and do research, but we know of no other station staff who teach. One department chair has stimulated his staff to undertake outreach activities, and several other individuals have mentioned their informal outreach work.

The Project Amendment also includes outputs (6a,b,c,d) regarding linkages with participants' degree-granting universities, with International Agricultural Research Centers (IARCs), with other Pakistani agricultural universities, and with national organizations such as PARC. We were told of a number of linkages with the IARCs and PARC. In addition, several staff mentioned connections to international scientific organizations beyond simple membership.

In summary, it is quite evident that TIPAN is just beginning to affect the research process. This is not surprising since efforts in this direction were only begun in earnest in February, 1988. Given the central role of research in TIPAN and in the AU system, consideration should be given to retaining the Research Specialist position in the TA Team for at least two more years. Furthermore, the new TAs who will be assigned to subject areas should have the mandate to work with their AU colleagues (campus and station) on performance. This means that those TAs must join with their colleagues in the whole array of research activities. They can serve as models, as stimulants, and as an additional source of collegial advice. Ideally they would join in collaborative research efforts with AU staff.

2. Teaching

In the past, NWFP-AU teachers followed what was discussed at the workshop as a mechanical strategy, in which there was minimal reflection either about the subject matter or about the larger environment in which the University operates. As a result, University staff took this same approach year after year, with little effort devoted to reflect on possible changes or improvements. One outcome of this evaluation process is a widespread view that the University should adopt an interactive strategy to teaching. An interactive approach means that the focus of reflection and learning is the outside environment. A two-way flow of information as well as proactive management of relations with outside client groups in the public and private sectors is stressed. Information gained through professional contacts outside the University allows University staff to understand better the changing environment in which courses are taught, and to design and assess curriculum based on specific skills and problem areas. There are signs that NWFP-AU staff are adopting a more interactive approach to teaching. The purpose of this section is to emphasize those teaching activities and initiatives that will promote the sustainability of the University during the coming decade and beyond.

2.1 Practical Training:

Where previously the mission of NWFP-AU was defined in terms of staffing the various government agencies which it serves, new potential clienteles are emerging. The workshop participants identified agribusiness industry as an opportunity for the University during the coming decade. As the Project Paper Amendment states, by the end of Phase II of TIPAN, there will be a:

"c. Placement program initiated with 90 percent placement of all graduates, 25 percent of these in private industry."

This is an ambitious but necessary target, and implies that the needs of both the public and

private sectors will have to be understood and shaped in defining and assessing curriculum. Currently, the extent of employment for agricultural graduates in the private sector is negligible, as a soon-to-be-released study undertaken by the Institute for Development Studies (IDS) indicates. The IDS study (still in draft form) was initiated with the purpose of determining the employment opportunities of NWFP-AU graduates in the private sector. In approximately 62 businesses contacted, only 27 out of some 12,000 employees of these firms have agricultural degrees, with 25 of the 27 graduates employed in the tobacco industry. Clearly, much work remains to be done to reach the placement target.

The PP Amendment states that:

"h. An internship program will be initiated to provide a minimum of three months of continuous practical training in the students' major field and all course work will have a practical orientation throughout the degree program."

The student group we met with was quite concerned about the lack of practical training. They said they learn theory and no connection is made between theory and practice. They complained of no contact with farmers. They wanted more field trips and internships. They also noted that some teachers do not know how to use lab equipment needed in their field. Overall, the students assessed teaching quality as quite variable. Some teachers were said to have a lot to offer, and others very little. Some teachers who returned from training seem to have lost rather than gained, according to the students.

The students were also worried about employment prospects. They said there were no vacancies in research. They believe their opportunities are limited mainly to government service - research and extension. They do not believe there are a significant number of openings in the private sector.

The IDS Study asked the 62 businesses to list the skills that agricultural graduates need in their present job that were not taught in the University classes and that should be added to the curriculum. Among the skill areas cited were: field production management; processing; basic organization administration; basic accounting and budget; human resource utilization (i.e., skills, training and planning, etc.); and marketing procedure and practices. From the Evaluation Team's discussions with agribusiness managers, it is apparent that curriculum changes will have to be made before NWFP-AU students and graduates will be seriously considered for internship programs and employment opportunities in the agribusiness sector. To make the needed changes, NWFP-AU should develop an ongoing dialogue with agribusinesses to understand better what skill areas NWFP-AU graduates need to compete for internships and jobs in this sector. In addition, NWFP-AU will have to cooperate with its alumni who are gainfully employed in the agricultural sector. Regarding the role of NWFP-AU alumni, one encouraging sign is an IDS publication (No. 202) from August 1989 that deals with overall employment trends among AU graduates, and concludes that "the graduates of the NWFP-AU are very willing to cooperate when they feel they can have input to improve the University. This is evidenced by over 77 percent of the total returning the survey and of those who actually received the instrument over 83 percent returned." The workshop participants identified NWFP-AU alumni as a source of employment. Alumni are a valuable resource for feedback on curriculum matters as well.

In addition to agribusinesses, other client groups ranging from development and relief agencies (non-governmental, bilateral and international) to entities outside the province (especially in the private sector) also can provide the University with feedback to tailor courses and internship programs. One workshop participant drafted a short paper suggesting that standards for creation of a new department should depend on evidence of a labor market need for graduates. This may be a promising approach to stem the proliferation of departments based on promotion criteria. It is a reactive strategy. NWFP-AU must go further, toward an interactive strategy. To become sustainable, NWFP-AU must aggressively promote its strengths to outside client groups in order to affect market demand for its graduates as well as adapt curriculum to changes outside the University.

The PP Amendment calls for, by the end of Phase II of the TIPAN Project:

"a. Seven hundred students enrolled in undergraduate programs, 200 enrolled in post-graduate programs."

and, corrected from what appears in the PP Amendment:

"b. Two PhD programs in place, with plans for expanding the programs."

Both the August 1989 IDS study as well as the upcoming IDS study are important first steps that NWFP-AU has taken to learn more about agribusinesses and other client groups. The relevant policy-making bodies should review the results of these studies, and discuss the implications for both the number and kind of students NWFP-AU should accept for admission during the next five years. The results of these studies should also be discussed as they relate to the development of PhD programs. The importance of establishing PhD programs at NWFP-AU was apparent from the Evaluation Team's discussions with research station staff, who have suffered by pursuing inferior PhD work at other institutions. University admissions plans should be reviewed periodically, and should be based on updated and more detailed data similar to what IDS has provided in these two employment studies. Follow up activities to the IDS studies, initiated by IDS and other stakeholders, should be supported by the University and the TIPAN Project, and involve NWFP-AU alumni as well as outside client groups in the public and private sectors. One goal of these follow-up activities might be the creation of a Placement Office. In order to make such an Office sustainable, however, the University must first gather more data about the actors and opportunities outside the University. Scope exists for collaboration with client groups in the private and public sectors to support development of curriculum; PhD programs; internship programs; and an active placement service or alumni group. The University leadership can play a role as a catalyst for bringing together all relevant bodies within the University and the province to explore these opportunities.

2.2 Replication of Strategic Planning Process:

The P1' Amendment states:

"j. Direct student involvement will be initiated on policy making bodies, and hostel and food service and other committees."

"i.The office of the Director of Student Affairs will be in place with responsibilities for counselling, placement, housing, student activities, health and women's programs."

The students feel they do not have any meaningful participation in University policy. A few comments were made about representation of political groups, but this seemed different from real student representation.

During the assimilation phase of the workshop, discussion centered on the need to transmit not only propositional knowledge and practical knowledge, but experiential knowledge as well. Experiential knowledge was defined as reflection on a problematic situation leading to conceptualizations as the basis for action to improve the situation. After successfully completing an experiential learning process in the form of the workshop, several participants stated that they will replicate the process with their students. This process provides the framework to integrate experiential learning in university teaching, while forcing both teachers and students to make the linkages between theory and action that are currently missing from the university curriculum.

The strategic planning process can be replicated with students to assist them in looking beyond their narrow concerns to the future, and how that future may affect the province, the University and their professional lives. Making use of this process will move the debate of how to involve students in policy making from the structural concerns (e.g., what committees will students serve on, how will the Student Affairs Office be organized) to the purposeful (e.g., what do students want to accomplish, and how can they go about it). The Sustainability Group should play a key role in replicating this strategic planning process for teachers and students. One possibility would be a number of workshops for teachers to introduce the strategic planning model as an experiential learning tool. Other possible means of replication should be explored by the Sustainability Group in collaboration with their University colleagues.

2.3 Student Assessment Methods:

The Project Paper Amendment states that by 1994, there will be:

"g. An improved grading system in force to better prepare students for post graduate employment and service."

There exists a great deal of concern about assessment methods of students within the University. Students have a low opinion of the current process. They believe that so many students get As or A+s because "the exams have no standards." We are not sure we fully understand this phrase. It may mean the exams are too easy or they are ambiguous so that many answers are valid. The students also complained about not being able to retake exams on which they do poorly. And they find the frequency of exams in the semester system too rapid. It does not allow them time for "extra" activities in-between.

We asked the students about stories we had heard of students pressuring faculty for higher grades. They acknowledged that this was widespread, that students applied whatever influence

they could - political, familial, friendship. They acknowledged that this was not the way things should be, but those were the realities and they did not seem very upset about it. But the students do seem to appreciate that a system that gives As and A+s to most students does not give future employers and graduate admissions committees any basis for distinguishing (or rewarding) good students.

The current system of student assessment is consistent with the lack of a merit reward system in the civil service. Advancement in employment grades is by seniority, not merit. Similarly, advancement through university grades is by seniority, not merit.

As undesirable as the current system of student assessment is, a number of cultural constraints prevent serious consideration of overthrowing the system completely. The Evaluation Team was impressed with the support administrators now give to faculty members to discourage cheating during exams. In addition, a few faculty are to be commended for discouraging "grade inflation." Still, a larger issue that needs to be addressed is the need and feasibility of assessment methods consistent with the aims of an externally-oriented, problem solving University to measure competencies in theory, practice, and the ability to apply a theory-informed-action approach to problem solving. Student assessment methods are an important policy issue for the University, and both University staff and students need to be included in this debate. Improvements in the current system should be introduced to measure student competencies in terms of the aims of a sustainable NWFP-AU. One approach would be to add an additional and separate assessment method to the current system that would give students the opportunity to demonstrate competencies in practical skill areas. The experiential learning process begun in the workshop should enter into the discussion.

2.4 Agricultural Textbooks:

According to the PP Amendment, by the end of phase II, there will be:

"d. Ten agricultural textbooks completed relative to Pakistani conditions."

Very few existing agricultural textbooks are written for Pakistan agricultural conditions. There is an expressed need by NWFP faculty that textbooks be published for Pakistan and be written by people with knowledge of Pakistan conditions. The students we met with were also concerned about textbooks and other learning resources. They find it difficult to study because the only materials readily accessible are notes they take during lectures. NWFP-AU faculty, Faisalabad Agricultural University faculty, and TA Team members already have met to discuss the need for textbooks. Faculty at the two universities indicated that the first books should be published for beginning students in each of the subject areas; major authors of each book should be agriculturalists from the universities with experience in teaching at the level for which the books are to be written; and the three major AUs should be involved in writing each of the books. Every effort should be made to select subject matter that is relevant to emerging employment opportunities for NWFP-AU graduates.

In summary, it is clear that NWFP-AU staff are beginning to approach teaching in an interactive manner. The staff include a number of talented individuals who are externally-

focused and future-oriented. The major challenge during Phase II of the TIPAN Project will be to support the efforts of these staff members so that they can continue to gather data on actors, institutions and emerging trends outside the University, share their research with relevant actors outside the University, and apply to their teaching responsibilities what they learn in this process.

3. Outreach

The TA Team Outreach Specialist wrote in his final report that University staff "should not think of themselves as working for the Outreach Directorate." Yet, in many cases, this is exactly what the University staff believe. This confusion over the Outreach Program's role is due in part to the newness of the endeavor; unlike teaching and research, outreach has no traditions or history in NWFP. When the TA Team Outreach Specialist arrived in July, 1985, he started to plan the program by developing preliminary papers as a basis for discussion, meeting with a number of stakeholders, and revising the plan based on their feedback. The 1987 TIPAN Evaluation states that all University staff "were involved in this most difficult behaviour modification process." Although the Specialist's departure last August prevented us from learning more about that process, it has become clear that a number of University staff did not fully accept the final plan.

Ultimately, the strength of the Outreach Program will depend on the effective mobilization of the entire University staff. All University staff should split their time between teaching, research and outreach. The TIPAN Project Paper recommends that the "overall faculty ratio should be about 45% teaching, 35% research, and 20% outreach." To accomplish this, University staff will have to take ownership for the Outreach Program. University staff will not feel a sense of ownership, however, until they are brought into the planning process, and their views are heard. An Outreach Program that fails to involve a majority of University faculty and station personnel cannot be described as successful, despite the hard work and commitment of Outreach Program personnel. Somehow, the vision of an Outreach Program as it has been articulated and developed since 1985 fails to excite a majority of University faculty and station personnel. Still, the workshop participants, like most University staff, understand the importance of outreach activities and cite opportunities for the University such as "improved linkages with growers/others," and "improved agro-business industry." Outreach has made considerable progress during Phase I in developing Program linkages, structures and plans. During Phase II, activating University staff must be the primary objective in order for Outreach to become an integrated and sustainable force at NWFP-AU.

3.1 Field Assistants Training:

The PP Amendment states that during Phase II of the TIPAN Project:

"b. The continuing education division will train 500 Field Assistants a year."

The GOP's PC-1 states that the Outreach Program will provide in-service training to Extension field personnel. Extension's Agricultural Training Institute (ATI) may not want to give up the

in-service training responsibilities that they have held. ATI has plans to build a new in-service training institute in direct competition with NWFP-AU. There is a potential duplication of services here that must be addressed. The situation is further complicated in that 95 percent of all trainers for in-service training are NWFP-AU field station staff. Currently, ATI gets no cooperation from NWFP-AU faculty. In his final report, the TA Team Outreach Specialist stated that "NWFP-AU Outreach must help campus faculty and station staff see that providing in-service training is one of the most important things they can do to fulfill their obligations to Outreach." This statement seems inconsistent with the view that University staff not equate outreach work with working for the Outreach Directorate. The Evaluation Team found that University staff were given insufficient forums to actively plan these training activities. Despite these problems, most University staff feel that Outreach should play a key role in training Field Assistants. A strategic planning workshop may be useful to involve University staff in developing training plans in order to adapt the training to University staff interests and constraints. Follow-up meetings should be held with workshop participants to discuss recommendations, develop an implementation plan, monitor progress, and revise the plan as needed.

3.2 Publications, Videos and Slide Sets:

The PP Amendment states that:

"c. Fifty outreach publications will be published yearly;" and,

"d. Fifty instructional videos and slide sets will be reproduced yearly."

Both Outreach staff and the TA Team feel these numbers are arbitrary; quality and relevance must be the driving factors of production. Special effort should be made by Outreach during Phase II to train University staff to develop teaching videos. Faculty members seem genuinely excited about video production, and this is the kind of energy and excitement that the Program must nurture if University staff are to assume ownership for outreach.

3.3 Mass Media Technology:

The PP Amendment states:

"e. An effective program of mass media technology will be established using radio, television and newspapers."

The "NWFP-AU Update" newsletter can serve as a powerful outreach tool, and as a forum for the exchange of technical, administrative, professional and social information among NWFP agricultural professionals. The emphasis of the newsletter should be a multi-channel process of information diffusion rather than the one-way channel of NWFP-AU to the outside. Since there have been difficulties keeping to the production schedule, it may be desirable to release issues every other month until there is adequate staff for a monthly effort. The most important aspects of the newsletter are whether it is informative, and how it appears. A semi-monthly

production schedule would allow the editor to experiment with desktop publishing software, and any other means to improve the appearance. The editor also needs to find out what agricultural professionals in the province are working on and writing, and solicit articles from them on their work. A slick and informative newsletter will promote pride among NWFP agricultural professionals, and NWFP-AU staff in particular, by calling attention to their accomplishments (ranging from participating in an outreach activity to receiving funding for a research project).

3.4 Strategic Planning to Increase AU Staff Support:

The Outreach Directorate will never have the manpower alone to make any real impact on the lives of farmers in the Province. As the Director of Outreach himself stated during the workshop, without University staff support for the Outreach Program, the program may fold following termination of the TIPAN Project. The top priority of the program during phase II, therefore, must be to serve in a facilitative role to help University staff network with a range of professionals outside the institution. If the Outreach Program moves in this direction now, by 1994 perhaps an improved situation will exist in which University staff perceive that it is in their self interest to pursue contacts with outside entities and call upon the Outreach Program as a critical resource to facilitate this process.

A strategic planning workshop may be useful for the Outreach Directorate and a cross-section of University staff to discuss how the Outreach Program can be improved to better assist campus and station personnel in the development of their own outreach activities. The outcomes of this workshop would then be examined by the Outreach Directorate, and improvements made in cooperation with University staff. The outcomes would also influence future decisions of the Outreach Program in the areas of program development and program management. The TA Team can play an important role in facilitating improved working relations between University and Outreach by requiring subject TA to serve as models for splitting their time between teaching, research and outreach, and providing support to AU faculty to do likewise.

In summary, the Outreach Program has made considerable progress in laying the groundwork for future activity. Still, what was striking about our conversations with University staff was the support for the purpose, but lack of interest in many of the activities. The objective of Phase II should be to pursue a number of activities, large and small, to build University staff support for Outreach. This will require flexibility on the part of Outreach staff; some resources may have to be diverted from existing programs for the ongoing process of assessing University staff needs. To become a sustainable NWFP-AU entity, the Outreach Program will have to provide service outside the university as well as within its walls.

4. Administration and Governance

Of the eight Outputs listed in the Project Amendment in this category, there has been movement on two.

"c. All personnel will be under one University personnel system."

This has been discussed above in the section on External Factors and Assumptions.

"d. A staffing plan will be operational; all staff will have approved written job descriptions."

This is a major undertaking. There was no comprehensive roster of all professional staff on the campus and stations. A very large effort was undertaken to identify all professional staff (433 in all, 180 on campus and 253 on stations); to determine their specialization; to learn their civil service grade, their age, highest degree and granting university; their TOEFL score; and to assign each of them a status regarding suitability for training. In addition to the 433 current staff, it was determined that 64 more were needed, for a total "Current Need" of 497. The staff on board and the new staff needed were sorted into 17 Discipline Areas.

As a starting point for decision making, the number of TIPAN training slots (149) was divided by 497 to yield 30% as an initial indication of the proportion of staff that could be sent for training from each Discipline Area. These figures were then reviewed on November 2, 1989, by Deans and Directors who adjusted the calculated training allocations (based on 30% for all Areas) according to their assessment of priorities and opportunities. The main change they made was to decrease Agronomic Production from a total (previous and projected) of 26 training slots to 20, and to increase Agronomic Plant Breeding from 13 to 21. A summary of the training plan is included in Appendix H.

The temptation to second guess is very great (especially for social scientists who see only 18 of 149 slots allocated to social science disciplines), but that kind of interjection is not warranted by an expatriate team visiting for only a few weeks. However, it may be appropriate to suggest that the staffing plan be considered a working document subject to revision as progress is made on the master plan for research. The time frame for adjustments is, of course, limited since participants must be launched quickly to meet pressing needs and to qualify for TIPAN funding.

The training plan contains a contradiction regarding Output 5a:

" The AU professional staff will be stabilized at 420 people (Research system and campus combined)."

The plan indicates that there are now 433 professionals and that the "Current Need" is 497. Furthermore the need projected for 1994 is 600, and for 1999 it is 689.

Outputs 5b, 5f, and 5g deal with a committee system, a procurement system, and a financial management system, respectively. There has not been significant change in these since the Amendment was approved, but there was no lack of comment about them in our meetings.

Indeed, these administrative matters received more comments by AU staff than did any other topic except the merger. And the point of all those comments was always the same -- there is too much centralization. Policy decisions are concentrated in the Vice Chancellor who draws advice from a small circle, mainly the deans and directors. There is no effective system of faculty committees. The Vice Chancellor has expressed a desire to be able to seek advice from and bounce ideas off of a group of faculty. During the workshop he indicated that the proposed "sustainability" group could serve him in this manner, as an advisory group or think tank.

Centralization in financial management and procurement is of even more concern to the staff than is centralization of decision making. Excessive centralization in finances and procurement hits them continuously and hampers their efforts to conduct research, to drive to outreach activities, to buy teaching materials, and to carry out a variety of other functions. We were not able to sort out all the details of these systems, but one oft-repeated statement is indicative of the problem -- department chairmen are said to control a budget of only Rs 500 (approximately \$25).

Station Directors have raised the problem of centralization in personnel management. Even with two codes of service, the Vice Chancellor evidently has significant control over all but the lowest grades of personnel at the stations. Directors have complained that this causes their staff to make too many trips to the campus to sort out their affairs.

Several individuals have said that the Vice Chancellor would like to decentralize administration of the University. TIPAN may be able to assist him in this by bringing in a short-term team of management experts, as has been discussed above.

VI. Purpose

According to the Project Paper (p.51),

"The purpose of the project is to integrate agricultural research in the NWFP with agricultural education at the university level, improve the quality of education offered and research undertaken by the University, and strengthen linkages with agricultural extension through a problem-solving, farmer oriented outreach program at the University. Achievement of the project purpose will be demonstrated by the existence of the following conditions upon the completion of the 11-year project:

- a. AU is a dynamic force for improved agricultural development in the NWFP;
- b. AU is producing high quality graduates who are staffing the public and private agricultural sector;
- c. the AU-directed provincial research program is generating improved technology packages which are relevant to NWFP farmers and their problems; and
- d. AU outreach activities are integrated with Provincial extension efforts, and new technologies are being effectively delivered to potential users and other client groups."

This statement of the Project Purpose and End of Project Status (EOPS) conditions describes a university that is outward looking and future oriented; a university whose education is valued by its students, whose graduates are valued by employers, and whose research is valued by farmers; and, because of this, a university that will attract sufficient inputs to insure continued production of its outputs. In short, the Project Purpose and the EOPS describe a university that is sustainable.

As was pointed out repeatedly by AU staff and administration, NWFP-AU is far from achieving this status. But the groundwork is being laid. Many of the necessary preconditions for sustainability now exist:

- o Much of the legal and administrative structure is in place for integration of station and campus research activities. This includes the Merger Act, the Research Directorate, and funding mechanisms. Important work still remains to be done to create a unified personnel system that will facilitate rather than hinder cooperation, to fill the position of Associate Research Director, to provide a campus research budget, to provide adequate support staff for administration, and to involve station and campus leaders in designing functional administrative frameworks for personnel, financial, and procurement matters.
- o Procedures have been established to improve the research process. These include guidelines for preparing proposals and for reporting results, a peer review mechanism, and outlines for a comprehensive review of past research aimed at forward planning.

The initial problems of the Technical Review and of the comprehensive research review indicate the need to start focusing on performance. The large amount of training under TIPAN will surely contribute to this.

- o Teaching is benefitting from training, materials, and organization. Numerous in-service workshops are held, audio-visual equipment is available, the semester system is functioning, a student handbook was published, an academic calendar is about to be issued, and teaching evaluations are gradually being adopted. The newness of all this means that many teachers and students have not yet adapted to and taken advantage of the new opportunities. Grade inflation is a symptom of the pressure faculty feel from students. Curriculum and educational programs need to be developed and assessed based on emerging opportunities in the job market, and the TIPAN Project is contributing to the development of this external focus.
- o Outreach programming is evolving. Linkages have been established with Extension and other provincial organizations for the dissemination of research information to farmers and other client groups in NWFP. Training sessions for Extension workers have started. The Outreach Program for women has been initiated. The effectiveness of the Outreach Program will depend on the mobilization of the University staff; this will be the greatest challenge of the Program during Phase II.

NWFP-AU is now at the stage of putting flesh on the bare bones of the new system that is emerging. And, to take the analogy one step too far, this must be done with good nutrition rather than with empty calories. As AU staff improve the quality and integration of their teaching, research and outreach, they must do so in an outward-looking, future-oriented manner. Research that is publishable in journals must also be adoptable by farmers. Teaching that gets students interested must also get them employed. Outreach that helps farmers for the next season must also prepare them for the next decade.

In Phase I, many of the preconditions for improving the quality of NWFP-AU were put in place. In Phase II, the AU administration and staff (from campus, from stations, and from TIPAN) must work together to derive maximum benefit from the new facilities, organizations, procedures and training. If those benefits are to be sustainable, AU staff and administration must focus on their external environment and on the future. The process initiated at NWFP-AU in November, 1989, was designed with this in mind.

VII. Goals

According to the Project Paper (p. 51),

"The primary goal of the project is to increase NWFP's agricultural yields, agricultural production, farm income and rural employment. The secondary goal is to transform the agricultural technology transfer network in the NWFP. While the TIPAN Project focuses on the NWFP, it is likely to serve as a model for eventual adaptation and replication in other parts of Pakistan."

Although a number of important linkages were established with agricultural entities outside the University during Phase I of the project, virtually all activity during this period seems to have been directed toward internal changes in structures (legal, administrative, budget and facilities) and, to some extent, processes (mechanisms and guidelines). Increasingly during Phase II, the emphasis of the project will be on the strengthening of processes as well as performance (in terms of both quality and orientation). Impact on NWFP agriculture will begin to be felt as performance increases, and it is hoped that there will exist a measurable impact on project goals after Phase II ends. It may be necessary to design a Phase III to help NWFP-AU build-in the key financial and institutional requisites to strengthen and sustain project impact (see figure 12).

If evidence of those impacts is to be sought in the future, a preliminary step should be an evaluation of data sources. Standard national or provincial agricultural sample surveys are not well suited to providing evidence of project impacts.

The secondary goal is to transform the agricultural technology transfer network of NWFP. Progress is being made toward this, as is discussed throughout this report.

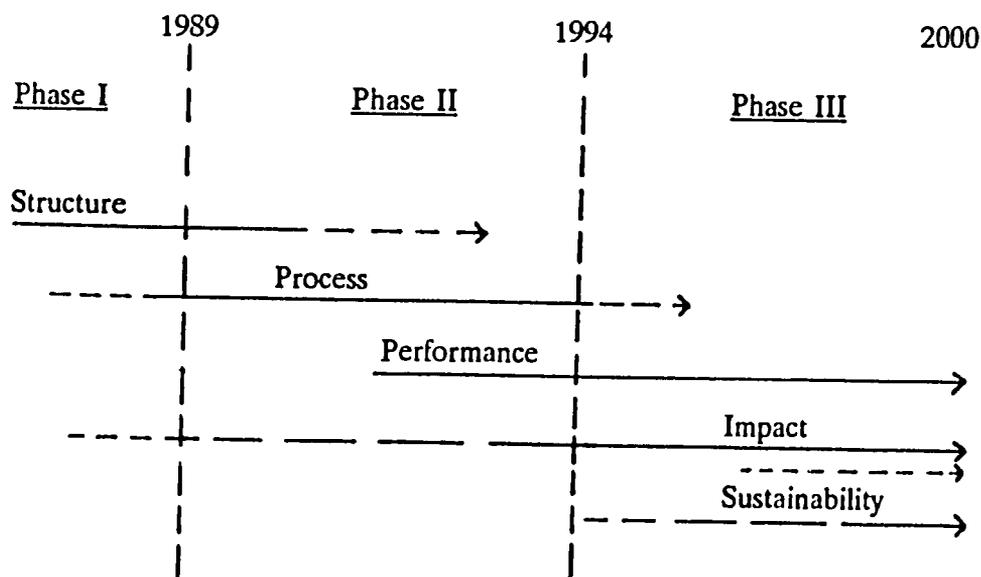


Figure 12. TIPAN Project Components

VIII. Beneficiaries

1. NWFP farmers and their families: A large part of the Outreach Program's Division of Outreach involves the development and testing of technologies on farmers' fields in the various agro-ecological zones of NWFP. Major Outreach activities implemented in the field include adaptive research and Farming Systems Research (FSR). The Division of Training/Continuing Education have held a number of workshops and other training activities, including travelling seminars for farmers, FVDB Female Field Assistant Training, and the Role of Women in an FSR Workshop. The Fruitfly Campaign placed 10,000 fruit fly traps on farmers' fields in the southern part of the province. Overall, the most significant constraint to Outreach Program implementation has been the limited involvement of campus-based faculty in field activities. The Evaluation Team met with the President of the Sarhad Chamber of Agriculture, NWFP, a national farmers advocacy group with 25,000 annual members. The President stated that the Chamber had never before received visitors from the TIPAN Project. Still, one week after our discussion, the Peshawar District Chamber President met with the head of the NWFP-AU Teachers Association to discuss farmer participation at the November 25-29 training course on fruitfly management. The District President was able to identify several farmers in the district who would benefit from this course, and assist in arrangements to bring the farmers to the University. Subsequent discussions with AU staff suggest that this Chamber officer is quite active in his support for district farmers, and willing to coordinate more closely with NWFP-AU. The Evaluation Team encourages further collaborative work with the Chamber during phase II in order to benefit the farmers of the province.

2. Workers in the NWFP agricultural community: Close working relationships have been established with Extension Deputy Directors of Agriculture of the various divisions of NWFP, selected Extra Deputy Directors of Agriculture, and a few Agricultural Officers (AOs) and Field Assistants (FAs) in the field. During phase II, there should be formal meetings between Outreach and Extension to discuss issues and build closer ties at the provincial level, and reach agreement as to what the role of Outreach will be regarding in-service training of Extension AOs and FAs. A cross-section of University staff should participate in these meetings to tailor the University's role to staff needs and constraints.

Regarding researchers at provincial stations and the campus, from 1985 to 1987, major accomplishments include the (partial) merger law, the Research Directorate, and new equipment. In 1988, peer review of project proposals was inaugurated, a comprehensive review of past research was designed and commissioned to many authors but the work was not forthcoming, guidelines were developed for reporting research results, and a training plan was developed.

3. AU Students, from NWFP, Tribal Areas and Baluchistan: The TIPAN Project Paper states that "a vital assumption of the project is its anticipation of producing higher caliber graduates who will staff the agricultural service agencies of the province." In an IDS study (publication No. 202, August 1989) examining employment of NWFP-AU graduates from 1982 to 1987, the following findings are significant: 1) Approximately one-third of the graduates of NWFP-AU are unemployed; 2) over ninety percent of employed graduates are employed in the Agriculture

sector; and, 3) the place of employment is primarily in the NWFP. Here, the IDS study notes that the NWFP Provincial Government hires only those people with residence there. The IDS study found that there is no relationship between job title and major. Most of the people going into Agricultural Credit and Banking have subject matter degrees other than Agricultural Economics. This may not be a disadvantage as long as they have courses in Credit and Banking as part of their program. The study also found that additional skills are needed by graduates of most departments in practical work experience, banking and credit, research methodology and contacting farmers and transfer of technology.

The August 1989 IDS Study notes that 197 NWFP-AU graduates were placed in NWFP-based jobs between 1982 and 1988. NWFP reached its peak in 1986, when 51 graduates assumed jobs in the province. The rate has decreased since then, with 44 graduates in 1987, and 20 graduates in 1988 assuming jobs in the province. 1987 also saw the largest number of students unemployed; it was also the year that more graduates were employed outside NWFP. Only three from Baluchistan were employed in 1987 and 1988 combined, when a number of students from that province had graduated. One possible explanation is that a larger number of them were unemployed, or that a larger number failed to return to IDS the employment questionnaire. The three graduates working in Baluchistan were probably residents of that province, and returned home after their education was complete. The August 1989 IDS Study recommends that certain departments in the University may want to become the outstanding departments in their field in the entire country of Pakistan and both attract students from other areas as well as place graduates there. The IDS Study states that a good example may be the Extension Communications department after the new buildings are completed. The new facilities in this department, IDS argues, will be far superior to any other University in Pakistan. IDS concludes that NWFP-AU should plan now to have this and other departments become national leaders, and thereby have employers (especially in private industry) seek graduates from NWFP-AU. Certainly, this approach would increase the appeal of NWFP-AU to potential students from other parts of Pakistan, and would promote the external focus of the University outside NWFP.

4. Faculty: By the fall of 1988, all four undergraduate classes and the MS programs were all taught under the semester system. More than 70 advanced degree participants have been trained in the U.S., and about 12 have returned with completed MS and PhD degrees. Advanced degree participants have been prepared for U.S. universities through English proficiency training and have gone to U.S. universities at the rate of 15 per year for the academic years 1984 through 1988.

IX. Lessons Learned

1. The Hawkesbury Strategic Planning methodology complements the University of Maryland Institutional Sustainability conceptual framework and is an effective means of developing (a) an awareness of the link between an interactive strategy and institutional sustainability, (b) an actual strategy, and (c) commitment to it. The methodology requires analysts to plan with people rather than for them, and enables participants to learn how they can facilitate a similar process.
2. To be effective as a strategic planning exercise, an internal evaluation must link an analyses of the past and present situation to a vision of a preferred future and develop commitment to an action plan and approval of it by legitimizers.
3. The project at NWFP-AU was evaluated for sustainability five years before its termination, sparking useful discussion and strategic planning. Sustainability issues should not be saved for the end of the project.
4. The TIPAN Project is encountering a high level of resistance. A project that makes major changes for other organizations is likely to meet resistance unless potential opponents of the project are allowed to participate in planning from the earliest stages of the project, and in a manner consistent with the process undertaken during this evaluation.
5. Experience with past development projects that were not sustained inhibits commitment to subsequent projects - particularly when people who committed themselves were perceived as being adversely affected.
6. Regarding the SCOPE framework, NWFP-AU is a case in point that the framework's discussions of capacity and performance as well as the strategy emphasis on performance versus learning were defined with artificial concreteness that creates problems when dealing with real situations. NWFP-AU both performs and reflects, so the dichotomy must be one of emphasis. The analysis, however, should not focus on the ratio of the learning to the need for learning. In other words, in rapidly changing and uncertain situations NWFP-AU needs to expend time, money and effort for gathering information, analyzing it and adapting the university to the situation.

- Promote a cross-functional (i.e., across teaching, research, outreach, governance) rather than a segmented orientation?
 - Promote an external and future-oriented perspective among faculty and students?
 - Broaden the prevailing production-oriented mind-set about the mission of the University?
- o What is the most effective form of Technical Assistance (short-term and/or long-term) to facilitate the desired decentralized budgeting and reporting system for a uniform personnel system based on verification of performance?
 - o How can the strategic planning process initiated during the internal evaluation be replicated and expanded? Specifically:
 - What is the most appropriate form of Technical Assistance to foster this?
 - How can strategic planning initiatives be recognized and supported?

Appendix A

MEETINGS/INTERVIEWS

- 11/3 - [Harry Dickherber, USAID/Islamabad/ARD]
- 11/5 - Mr. Saeed Shah, Director of Planning, University Grants Commission (UGC)
[Mr. Abdul Wahid, USAID/Islamabad/ARD]
[Harry Dickherber, Pat Peterson, Chief ARD, USAID/Islamabad]
- 11/6 - [Harry Dickherber, Qayyum Khan, USAID/Islamabad]
[Mission Directors' Evaluation Committee USAID/Islamabad: Jack Connolly, Dick Goldman, Lynn Lewis, Dick McLure, Gordon West. Full Evaluation/Facilitation Team present with Harry Dickherber and Qayyum Khan]
- 11/7 - Group introductory meeting with key Stakeholders: Deans, Department Chairmen, Research Station Heads, Univ. Administration and other faculty. Chaired by acting Vice Chancellor, Prof. Basit Ali Shah (Dean, Faculty of Animal Science)
[Meeting with TA Team]
- 11/8 - Mr. Hafiz Inayatullah, Director of teaching &
Mr. Muhammad Siddiq, Director of Research
Dr. Nural Islam Mian, Pro-Vice Chancellor/Director IDS/Dean, Faculty of Ag Econ, Extension Ed, Rural Soc & Dev Studies
Dr. Mohammad Saeed, Chair, Food Science & Technology
Mr. Mushahidden Shah, Director of Finance
- 11/11 - Dr. Mir Hatam, Chair, Agronomy
Dr. Imran Khan, Assoc. Prof./Mardan
Mr. Basit Ali Shah, Dean, Faculty of Animal Science, Chair, Animal Nutrition.
Dr. Tajammal Hussain, Chair, Ag. Chem & HN
Dr. Saeedul Hasan, Chair, Plant Breeding & Genetics
Dr. Jehangir Khan Khalil, Provost, Professor, Ag. Chem & HN
Mr. Hafiz Inayatullah, Chair, Horticulture, Dir. of Teaching

Mr. Muhammad Iqbal, Registrar

Dr. Iqbal Shah, Chair, Livestock Management

[Eddington]

11/12 - TARNAB Research Station

Mr. Syed Abdul Qadim, Director General of Research, Director of Tarnab

Group 1

Dr. Saifullah Khattak, Project Director Horticulture

Mr. Purdil Khan, Director Vegetable Production

Mr. Abdur Rashid, Director Plant Physiology

Dr. Sabir Hussain Shah, Director Plant Pathology

Mr. Aurangzeb Khan, Asst. Entomologist

Group 2

Mr. Inayatullah Khan, Director Agronomy

Mr. Sadaqat Hussain, Director Ag Chemistry

Mr. Jan Muhammad Khan, Asst. Food Technologist

Mr. Salahuddin, Research Officer - Oilseed Crops

Mr. Muslim Shah, Director, Oilseed Crops

Mr. Efkhar Ahmad, Research Officer

Group 3

Mr. Fazil-Subhan, Director Statistics

Mr. Umar Rahim, Research Officer - Biochemistry

Mr. Fazil Karim, Director Food Technology

Mr. Iftikharul ul Haq, Research Officer - Horticulture

MARDAN/SCRI

Mr. Ghulam Sarwar, Director Mardan

Mr. Mohammad Amin, Sugarbeet Agronomist

Mr. Ahman Jan, Entomologist, Sugar Crops

Mr. Gulzar Ahmad, Sugarbeet Botanist (in-trng)

Dr. Said Rahman, Asst. Research Officer

11/13 - Mr. Adbur Rauf Khattak, Director Outreach

Mr. Baz Mohammad Khan, Divisional Program Leader (Outreach)

Miss Roshan Ara Yusafzai, Research Specialist, IDS

Miss Raneela Begum, Research Specialist, IDS

Mr. Attaullah, Librarian

Dr. Paigham Shah, Assoc. Prof, Agronomy

Mr. Mohammad Ayaz, Sec to VC, Lecturer Extension Methods

[Kroening]

PIRSABAK/CCRI

Mr. Allauddin Khan, Director Pirsabak
Dr. Mohammad Saleem, Assoc Prof, Plant Breeding & Gen
Mr. Mohammad Hashim Khan, Asst Botanist, Wheat
Mr. Bashir Ahmad, Asst Research Officer
Dr. Mohammad Khan, Asst Botanist (maize)
Mr. Khaista Gul, Asst Botanist (corn)
Mr. Rafiullah, Asst Research Officer

11/14 - Dr. Mushtaq Mian, Chair, Poultry Science

Dr. Bashir Ahmad, Lecturer, Agronomy

Dr. Ghulam Habib, Assoc. Prof, Animal Nutrition

Mr. Sherin Khan, Admin. Officer to VC, Director of Campus Farm, Assoc. Prof,
Agronomy

Dr. Adbur Rashid, Assoc. Prof, Soil Science

Mr. Aftau Gul, Regional Manager, Jaffar Brothers

Mr. Javid Qaiser, Acting Manager/Director, Agricultural Development Association

Mr. Ihsanullah Khan, President, Chamber of Agriculture

11/15 - TARNAB

group 1

Habib ur Rehman, Director Soils and Plant Nutrition Division
Ajab Khan, Assistant Food Technologist

group 2

Mr. Sabir Hussain Shah, Pathologist
Mr. Gul Nawaz, Entomologist

University (meeting on research)

Dr. Mir Hatam, Chair, Agronomy
Dr. Paigham Shah, Assoc. Prof, Agronomy
Dr. Bashir Ahmad, Lecturer, Agronomy
Dr. Imran Khan, Assoc. Prof, Plant Breeding & Genetics
Mr. Jehangir Khan Khattak, Chair, Soil Science
Dr. Mushtaq Mian, Chair, Poultry Science

11/16 - Dr. Naseer Hussain, Chair, Plant Protection

Dr. Khan Bahadur Marwat, Assoc. Prof, Plant Breeding & Genetics (Weed Science)

Mr. Rauf Khattak, Director Outreach

Mr. Baz Mohammad Khan, Divisional Program Leader, Outreach

Mr. Raja Sajjad Ali, Senior AV Producer, Outreach

Mr. Mansoor Ahmad, Cameraman, Outreach

- 11/26 - Mohammad Naeem, Ag Economics (4th year)**
Mohammad Intiaz, Plant Breeding & Genetics (4th year)
Fazal e Gubhan, Entomology (4th year)
Mohammad Khan, Plant Protection (4th year)
Khalid Usman, Agronomy (4th year)
Mohammad Ibralum, Horticulture (4th year)
Riaz Ahmad, Plant Breeding & Genetics (4th year)
M. Ashard Khan, Pathology, (4th year)

11/29 - MINGORA

**Mr. Mohib Ullah, Director
and Section Heads**

Note: The Evaluation Team met with many of the individuals listed above on more than one occasion. After the initial meeting the names & interview dates are at times not repeated.

Appendix B

NWFP-AU Team

Mr. Gulzar Ahmad, Mardan, Sugarbeet Agronomist
Dr. Everett Eddington, TIPAN TA Team
Dr. Mir Hatam, Chairman, Agronomy
Mr. Hafiz Inaytullah, Director of Teaching
Dr. Jehangir Khan Khalil, Professor, Ag Chem & HN, Provost
Dr. Imran Khan, Assoc Prof, Plant Breeding & Gen, (Mardan)
Mr. Jehangir Khattak, Chair, Soil Science
Mr. Rauf Khattak, Director of Outreach
Dr. Saifullah Khattak, Tarnab, PD Horticulture
Dr. Mushtak Mian, Chair, Poultry Science
Mr. Baz Mohammad, Regional Coordinator (Peshawar), Outreach
Mr. Syed Abdul Qadim, Director General, Director Tarnab
Mr. Habib ur Rehman, Tarnab, Research Officer
Dr. Mohammad Saeed, Chairman, Food Science & Technology
Dr. Mohammad Saleem, Associate Prof, PBG, Pirsabak
Mr. Muhammad Siddiq, Director of Research
Miss Roshan Ara Yusafzai, Research Specialist, IDS

Appendix C

"WHAT WILL THE NWFP BE LIKE IN 2010"

Self sufficient in food (nutrition, cereals)

Employment opportunities: *main problem*

Population: should be 1% birth rate, now b.r. > 4%
will be too high in 2010

Education opportunities - not enough for this --> 2 x 2010

Economic Development

Agricultural Mechanization - will improve

Outdoor recreation center for Pakistan

Agrobusiness: -improved seed
-need involve private/multinationals in NWFP
-vertical integration of production (e.g. Punjab)
-poultry, fruits
-need close coordination of
producer-processor-marketer-advertising

Fruit industry for export: -fruit processing

Increase animal products: -poultry, milk, eggs

Health facilities: -will be stagnant
-are declining

AU like US universities with USDA merger

Role of Women (esp. rural)

Rural Development: -Education
-Health
-Communication
-Employment

-Provincial investment
-Industry in rural areas (poultry, orchards, fruit processing, cottage industry)
-Need for raw materials (is there now)
-Infrastructure needed (water, electricity, roads)
-Need political influence
-Marketing -low return to farm
-storage: esp. for fruits/perishables (in peak season down)
also animal products

- Government incentives to encourage rural location
- tax forgiveness

Ag model for others

Remove people from ag

- find other employment in rural areas
- small industries (carpets)
- tourism, skiing near SWAT, fishing, trekking in mountains

Problem of migration from rural to urban

- causes political instability
- make rural areas more attractive

Housing - new kinds (multistory)

Deteriorating:

- Health facilities
- Ag legislation
- crop zoning, prevent some from growing/glut on market
- feed quality control, labeling
- Rural education/all education (esp for women)
- Political system
- Rural planning (ad-hocism)
- Water logging
- Water shortage
- Pest Problems (misuse of DDT, etc - health)
- Deforestation in mountains
- need afforestation in plain
- Pollution of rivers
- soil erosion

What is the NWPF going to be like in the year 2010?

1. Enhanced availability of irrigation
2. Increased numbers of educated people
3. Gains in plant and animal genetics
4. Complete sugar cane breeding program in place
5. Farmers coming to the University seeking advice
6. Improved teaching standards (comparable to world standards)
7. Increased need for job opportunities
8. Increased political awareness
9. More use of biological/less use of chemical fertilizers
10. Professional relations between scientists will improve
11. Student specialization will be based solely on job opportunities
12. Agriculture will become an industry
13. More area for fruits/vegetables because of small holdings
14. Greater awareness that integration of nation-building departments will lead to success
15. More efficient use of water for farming
16. Agriculture on stressed land will be improved
17. Students' realization of their responsibility for work
18. Planned agricultural production policy (based on local and export needs)
19. Better availability of roads for improved markets
20. More area under cultivation due to reclamation and conservation
21. Less availability of land for agricultural production
22. Systematic problem-solving research will be in place
23. More (and more effective) farmers' cooperatives will be formed
24. Better cash crop substitution (for poppy) in less developed areas
25. Better availability of crop varieties for specific areas
26. More national level thinking regarding NWFP
27. Better farm advisory service through better agricultural research
28. Agricultural university regarded as prestigious institution for learning and research
29. Women more effectively involved in agricultural development
30. Improved marketing system will evolve so farmer gets maximum return for produce
31. Degradation of natural resources
32. Communication/transportation advances
33. Farming by agriculture graduates themselves

Appendix D

FOUR STRATEGIES FOR INSTITUTIONAL SUSTAINABILITY - AN OVERVIEW

STRATEGIC PLANNING WORKSHOP - NOVEMBER 19, 1989

Universities can adopt one of four basic strategies - mechanical, adaptive, reactive or interactive. One way to distinguish between strategies is to note whether the university's emphasis is on the active dimension; that is, on the accomplishment of a particular task, or on the learning or reflective dimension. This distinction does not reflect a division into "good" universities or "bad" universities. Learning is a time-consuming and risky business and draws resources away from the performance necessary to keep the university viable. Decisions to emphasize action or learning must be based on external conditions or other internal factors. Another way to distinguish the strategies is to note whether the focus of attention is principally internal or external. Again, the strategic decision over which orientation to adopt will depend on the conditions at hand.

Mechanical strategy: A university that emphasizes the active dimension and focuses internally adopts a mechanical strategy. With such a strategy, the university translates learning into performance, but with minimal reflection, either about the skills themselves or about the larger environment in which the system finds itself. It might be very efficient at doing very well-defined tasks, but it is not configured for anything beyond isolated learning. One example would be a university TOEFFEL program that successfully trains English speakers year after year. Assuming there is no need to make the requirement more stringent, and the English language does not change significantly, the university will continue to take the same approach year after year, with little need to reflect on possible changes or improvements. Under conditions of low internal complexity and low external hostility, a mechanical strategy will promote sustainability of the university.

Adaptive strategy: A university that adopts an adaptive strategy also emphasizes the active dimension at the expense of learning. But because it has an external orientation, which allows it to match problems with actions selected from its repertoire of potential actions, such a system can adapt to changes in the larger environment. When the university accepts a larger number of applicants based on a larger number of applications received, when farmers cultivate larger plots of land or traders handle more food in response to increased demand in the environment, the agricultural system is adapting. These sorts of quantitative adaptations (using more resources but in familiar ways) result from matching environmental changes with an existing response potential, which does not require the kind of reflection or learning that is needed for making qualitative changes (using resources in new ways). Under conditions of medium internal complexity and medium external hostility, an adaptive strategy promotes sustainability.

Reactive strategy: When a university follows a reactive strategy, it reflects and learns, but that learning is directed to improvements in internal operations and/or skills levels. When external disturbances begin to affect performance, the university can react, only the reaction is internally-oriented, focusing on making internal changes to respond to the new external conditions. A university that makes changes in its programs based on new Government priorities is applying a reactive strategy. A rural credit bank that revises its lending procedures and institutes a new training course for loan officers in response to rising default rates is applying a reactive strategy. The focus of change is internal to the university. Under conditions of high internal complexity and medium external hostility, a reactive strategy will promote sustainability.

Interactive strategy: Here the focus of reflection and learning is the outside environment. A two-way flow of information as well as proactive management of relations with outside client groups in the public and private sectors is encouraged. Information gained through professional contacts outside the university allows university staff to better understand the changing people and policies, and respond in a way that provides leadership and service to the community as well as professional growth to individual staff. One example is an ongoing university dialogue with outside client groups to identify groups expected to hire university graduates in the short-run, and adjust university curriculum to make graduates more attractive to potential employers in these emerging areas. With this strategy, the university would seek support for this initiative from all relevant stakeholders, including the Government. The key difference between an interactive strategy and a reactive strategy is that an interactive approach demands that the university exert influence on shaping the outside environment. Under conditions of medium internal complexity and high external hostility, an interactive strategy will support sustainability.

Which of these strategies are you aware of in relation to NWFP Agricultural University?

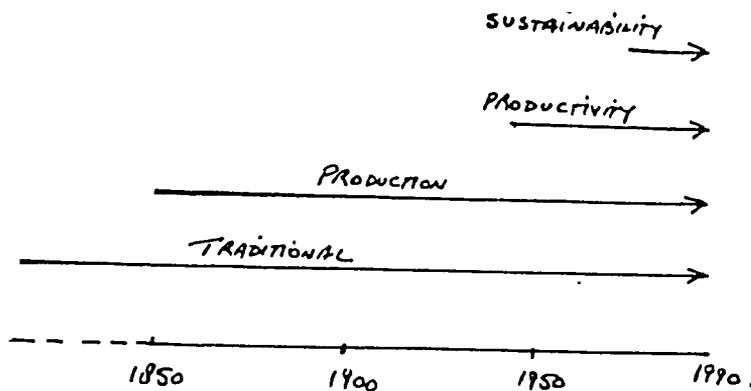
SYSTEMS STRATEGIES

		<u>orientation</u>	
		internal	external
Dimension of capacity emphasized	active	mechanical	adaptive
	reflective	reactive	interactive

Some Concepts Pertaining to the Role of Agricultural Universities

I find it useful to think of agriculture as reflecting a number of historical trends, where the trends are marked by the emergence of new "mind-sets" or ways of mentally viewing agriculture. The mind-sets have a major effect on agricultural practice. New mind-sets don't replace the existing ones, rather they add to them, and the result is an increasingly complex way of thinking about and practicing agriculture.

Four Phases of Agriculture

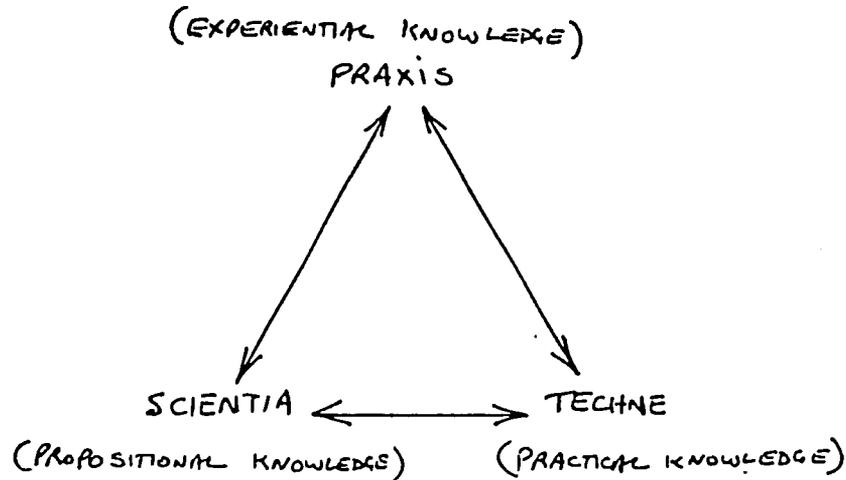


The traditional phase is characterized by farming practices passed from generation to generation with little or no change. The production phase began with the concept of the "law of the minimum" and the search, using reductionist scientific method, for the next most limiting factor on production. This perspective is characterized by an emphasis on the natural and biological sciences as they relate to production technology. The "green revolution" was a high point in the production tradition. The productivity phase is characterized by an emphasis on optimising the conversion of inputs into outputs. Its emergence was characterized by the rise of farm management economies as a significant discipline and the search for more systemic approaches than those that characterized the production phase.

The most recent phase has seen a spreading concern about sustainability of agricultural systems in both a natural resource and social sense. It is characterized by an ecological perspective and a focus on relationships between components.

The Challenge for Agricultural Universities

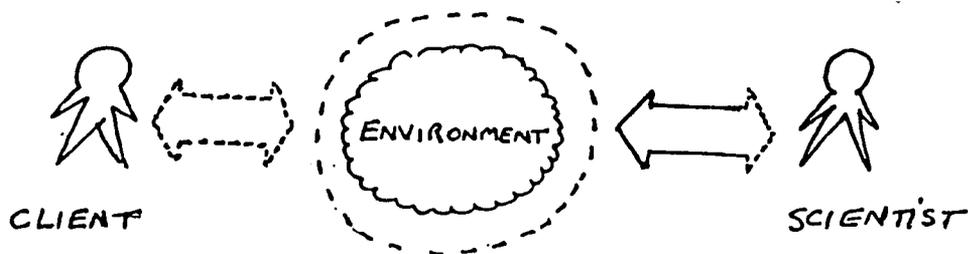
A consideration of the scenario I have proposed poses some obvious challenges for agricultural universities. These can be considered in the light of three traditions of education which are based on the relative emphasis on three different ways of knowing.



The praxis tradition (examples of which are relatively rare compared with the other two) can be characterized as theory-informed-action where reflection on problematic experience leads to conceptualizations which are the basis of experiments to improve the situation. An example of this is the model being used to structure this workshop.

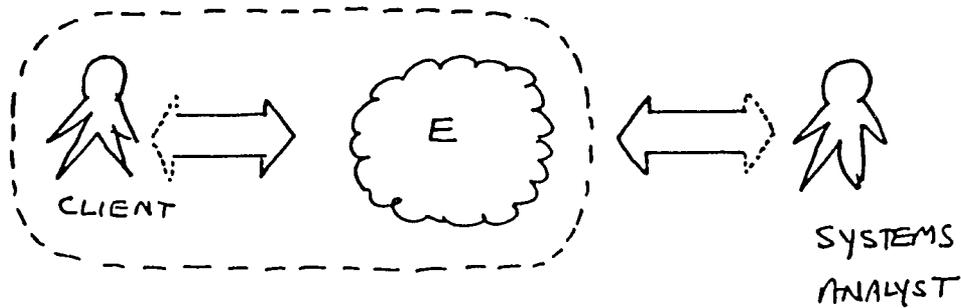
Three Different Models of Agricultural Praxis

If we relate the concept of praxis to the idea of agricultural phases we can recognize three different models of praxis.



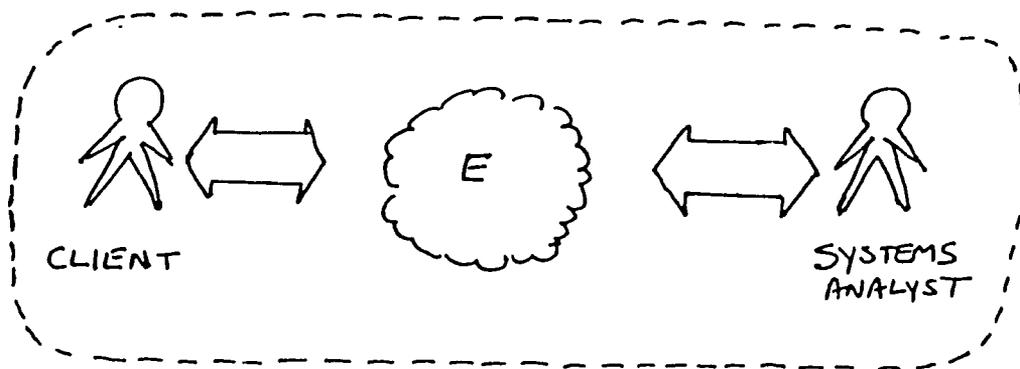
PRAXIS FOR PRODUCTION

Here the scientist's interest is in the environment of the potential or actual client, not in the client. The aim is to find out how to increase production and the client is seen as a passive bystander. The scientist is more concerned with production than he is with effect on environment.



PRAXIS FOR PRODUCTIVITY

The productivity model has the systems analyst, including the client in the system he is concerned with, because he realizes the importance of the manager in the performance of the system. As with the production model, the emphasis is on what effect the analyst can have on the system and relatively little on his own learning as a result of his interaction with the system.



PRAXIS FOR SUSTAINABILITY

The sustainability model has the analyst as a co-learner with the client and there is an emphasis on the role each can play on affecting the learning of the other and the search is for a system that is sustainable in both a social and natural resource sense. An ecological perspective that includes a concern with the relationships between people and the natural environment, as well as between elements within the natural environment (which is the traditional focus of ecology) is called for.

Appendix E

STRENGTHS-WEAKNESSES-OPPORTUNITIES-THREATS (S.W.O.T.)
Monday, November 20

Strengths: Qualified staff
Building: mobility, literature, land, irrigation, good students
Dedicated People
Research, Merger/Autonomy
Secured University Linkages

Weaknesses: Training
Funds
Discipline (students)
Communication
Job Limitation (good)
Centralization
Practical Skills
Institution within Institution
Imperfection in Merger
Poor Marketing
Lack of Evaluation/Incentives
Low Support Prices
Self Interest
Seniority
Traditional Approach
Lack of Motivation for Staff
Lack of Cooperation in Using Equipment/Facilities

Opportunities: Training
Quality-Education
-Research
-Outreach
Modern University
Self-Employment
Quality-Education
-Research
-Outreach
Seed Industry
Demand for Agricultural Products
Business, Government, etc. to sponsor projects
Cooperation of AU with others
Awareness of Farmers

Threats: Unemployment
Political Instability
Larger Number of Non-Technical Staff
Sustainability
Customs/Traditions
Centralization
Student Unrest
Polarization in Staff/Political Students

STRENGTHS-WEAKNESSES-OPPORTUNITIES-THREATS (S.W.O.T.)
Monday, November 20

Strengths:

- 1) Qualified Staff
- 2) Improved situation of some equipment & implements/machinery
- 3) Some cooperation between teaching, research, & outreach (extension)
- 4) Some improvement in situation of office space/accommodation (teacher & student especially)
- 5) Land availability & water resources
- 6) Manpower (unskilled)
- 7) Positive students apt? for good/improved education
- 8) Improved library situation/Lab (on campus)

Weaknesses:

- 1) Centralization of power
- 2) Lack of involvement of research staff in decision making
- 3) Lack of proper linkage between teaching & research
- 4) Poor curriculum
- 5) No local textbooks
- 6) Spoon feeding
- 7) Research quality (in most cases)
- 8) Poor facilities for research & teaching
- 9) Poor teaching & research environment
- 10) Insecurity of service
- 11) Poor thinking oriented teaching & research
- 12) Lack of single service code for teaching & research
- 13) Lack of motivation & recognition
- 14) Lack of consideration based on achievements/qualifications
- 15) Misuse of facilities, equipment (esp. transport)
- 16) Under utilization of research facilities
- 17) Political interference (pressure group)
- 18) Lack of effective leadership
- 19) Lack of flexibility in accounting matters
- 20) Lack of accountability
- 21) Insincerity with profession
- 22) Lack of discipline in services & students
- 23) Delivery of poor quality teaching/research goods
- 24) No/poor health, education, recreation facilities (on & off campus)

Opportunities:

- 1) Opportunity for advanced training
- 2) On-the-job opportunity for lower staff
- 3) Female involvement
- 4) Improved job opportunities
- 5) Improved linkages with growers/others
- 6) Development of improved crop - fruit, vegetable varieties/ package of technology
- 7) Improved agro-business industry

Threats:

- 1) Merger instability (weak sustainability)
- 2) Centralization of powers
- 3) Bureaucracy (Red Tapism)
- 4) Students/staff involvement in politics (on-campus, off-campus)

Appendix F

A goal implied in our discussions in the workshop is that the NWFP-AU will become an institution noted for its excellence in meeting, through its policy and operations, the emerging needs of the NWFP. For this to occur it must adopt an external and future oriented perspective such that it is aware of emerging needs and shapes its policy and operations to meet them.

Assuming that the members of the group of leaders at this workshop can play an important role in helping to bring this about:

- o **what do you imagine their aim to be?**
To improve communication within the university system.
- o **why do you think this is desirable?**
So that all groups within the university could be working together to meet the goals.
- o **who will their activities be aimed at?**
The professional faculty & staff of the university.
- o **whose support and approval will they need?**
VC, Pro-VC, Deans, & Directors.
- o **what is the main constraint they will have to overcome?**
The lack of ability to key people to see the necessity of such a communication system.

A goal implied in our discussions in the workshop is that the NWFP-AU will become an institution noted for its excellence in meeting, through its policy and operations, the emerging needs of the NWFP. For this to occur it must adopt an external and future oriented perspective such that it is aware of emerging needs and shapes its policy and operations to meet them.

Assuming that the members of the group of leaders at this workshop can play an important role in helping to bring this about:

o **what do you imagine their aim to be?**

To find out and analyze the strength and weaknesses of the system and then to try to solve those problems/weaknesses using the available/possible resources efficiently.

o **why do you think this is desirable?**

Because this will meet some/all of the emerging needs of the people/area (external & future perspective).

o **who will their activities be aimed at?**

Those people (staff, government) who have the ability to do the job well (dedicated ones).

o **whose support and approval will they need?**

The people & those involved in the programme/process (also general public).

o **what is the main constraint they will have to overcome?**

Traditions, social and customary (funds).

A goal implied in our discussions in the workshop is that the NWFP-AU will become an institution noted for its excellence in meeting, through its policy and operations, the emerging needs of the NWFP. For this to occur it must adopt an external and future oriented perspective such that it is aware of emerging needs and shapes its policy and operations to meet them.

Assuming that the members of the group of leaders at this workshop can play an important role in helping to bring this about:

o **what do you imagine their aim to be?**

The first aim is to create an awareness among those concerned (staff first & students later) to realize the need for a change in outlook, i.e. discuss weaknesses and threats, explore opportunities and strengths and agree upon approach.

o **why do you think this is desirable?**

Because without convincing people to realize the need for a change, no change is possible.

o **who will their activities be aimed at?**

Staff (Teachers, Researchers, Administrators), students in smaller groups, selected graduate students.

o **whose support and approval will they need?**

The Vice-Chancellor.

o **what is the main constraint they will have to overcome?**

Some people might be reluctant to change, they would stick to traditions. I think they'd be ignored once a sizable number agree on the new approaches.

A goal implied in our discussions in the workshop is that the NWFP-AU will become an institution noted for its excellence in meeting, through its policy and operations, the emerging needs of the NWFP. For this to occur it must adopt an external and future oriented perspective such that it is aware of emerging needs and shapes its policy and operations to meet them.

Assuming that the members of the group of leaders at this workshop can play an important role in helping to bring this about:

o what do you imagine their aim to be?

- 1) To convince our colleagues in research and teaching that it is in the best interest of the people of the NWFP to work as a team.
- 2) To convince government and private agencies to fund research.
- 3) Decentralize powers.

o why do you think this is desirable?

Because this is a more effective approach towards developing a productive system.

o who will their activities be aimed at?

- 1) Teaching & research staff.
- 2) Government & private industry.

o whose support and approval will they need?

Colleagues, government, and industry.

o what is the main constraint they will have to overcome?

- 1) Bureaucracy
- 2) Vested interest
- 3) Taboos

A goal implied in our discussions in the workshop is that the NWFP-AU will become an institution noted for its excellence in meeting, through its policy and operations, the emerging needs of the NWFP. For this to occur it must adopt an external and future oriented perspective such that it is aware of emerging needs and shapes its policy and operations to meet them.

Assuming that the members of the group of leaders at this workshop can play an important role in helping to bring this about:

o what do you imagine their aim to be?

To share the experience of this workshop with others in the system and get their views on points discussed (strengths, weaknesses, opportunities, threats, etc.).

o why do you think this is desirable?

Because when they will express their views, and then some of their views will get accommodation, then they will be with the improved system.

o who will their activities be aimed at?

Their activities will be aimed at

- i. Those who are in the system
- ii. Those whose improvement is desired.

o whose support and approval will they need?

- i. Those who are in the system
- ii. Those whose improvement is desired.

o what is the main constraint they will have to overcome?

The weaknesses of the system.

A goal implied in our discussions in the workshop is that the NWFP-AU will become an institution noted for its excellence in meeting, through its policy and operations, the emerging needs of the NWFP. For this to occur it must adopt an external and future oriented perspective such that it is aware of emerging needs and shapes its policy and operations to meet them.

Assuming that the members of the group of leaders at this workshop can play an important role in helping to bring this about:

o **what do you imagine their aim to be?**

A better and conducive atmosphere of work so as to make the workers/teachers/researchers useful organs for the betterment of the NWFP farming community.

o **why do you think this is desirable?**

Good working conditions/atmosphere can be the only guaranteed instrument for dedication and better output.

o **who will their activities be aimed at?**

The end result of their activities will be the betterment of farmers of this province through the betterment of the group working closely.

o **whose support and approval will they need?**

They need the approval of their office, teachers and a moral support from the public, including the elected representative of the people, and industry for which their findings may be useful.

o **what is the main constraint they will have to overcome?**

The main constraint which can be encountered may be discouragement/non-appreciation of this work. That should not be allowed to come in the way. Good work will ultimately pay.

A goal implied in our discussions in the workshop is that the NWFP-AU will become an institution noted for its excellence in meeting, through its policy and operations, the emerging needs of the NWFP. For this to occur it must adopt an external and future oriented perspective such that it is aware of emerging needs and shapes its policy and operations to meet them.

Assuming that the members of the group of leaders at this workshop can play an important role in helping to bring this about:

o **what do you imagine their aim to be?**

As a first step the basic aim will be the provision of necessary organizational infrastructure, preferably a unified service code, for on and off-campus employees of the University. Once this is established the leaders can move forward freely to achieve the desired objectives.

o **why do you think this is desirable?**

Because there is a communication gap between the on and off-campus employees due to separate service codes.

o **who will their activities be aimed at?**

Policy makers in the AU and Provincial Government.

o **whose support and approval will they need?**

Legislative support with the help of policy makers.

o **what is the main constraint they will have to overcome?**

Understanding, professional relations, unified approach to achieve the goals. Team work spirit.

Appendix G

WHAT (activities essential for the transformation of the participants in this workshop into a functioning group.)

- o Define aim/purpose
- o Determine how to achieve aim
- o Determine composition
- o Get approval for mandate
- o Enlist cooperation
- o Monitor and evaluate

HOW

Define aim:

- o Make NWFP-AU sustainable, center of excellence;
- o Work for an interactive strategy: teaching, research, farming community links;
- o Motivation, planning and recommendations leading to a sustainable AU;
- o Evaluation and consultative group:
 - of other committees, establish new committees
 - guidance to administrators & planners;
- o Convince agribusiness to support research projects;
- o Advisory council: Promote linkage between teaching/ research/extension and technical assistance and technical transfer to benefit future;
- o Develop a system that will result in more meaningful research & more complete students;
- o Provide input to University Administration & donors on improvement programs;
- o Make recommendations on how to improve teaching/research/ Outreach so rural life is improved & people in general (sustainable).

Determine how to achieve aim:

- o Discuss with ALL concerned: farmers, station staff, campus, women;
- o Obtain consensus - Teachers Association, Academic Council, Station Directors (internal focus);
- o Coordinated team-work with researchers, teachers; more powers for teachers, researchers; looking for more sources of funding;
- o Involving all people within the system; linkages between policy-makers and people (coordinate);
- o Decentralize of certain powers, and more coordination between workers;

SS

- o Body should be approved by Syndicate (through the VC); body should be consultative group with no powers itself;
- o Must get approval of VC; arrange for workshops & lectures on University aims/goals/functions; for publications (re: issues on sustainability); work closely with TIPAN
 - (NOTE: TIPAN here defined as team working in collaboration with the University, i.e. "team of collaborators");
- o Through an organized system of work in the environment;
- o After building consensus within the group, and building support outside of the group, VC should approve as well;
- o To take into confidence administration as well as all people in process;
- o Also through the dedication of team members; committee members should work as consultants.

Determine Composition:

- o Qualified persons based on work and achievement; broad based from all disciplines;
- o Dedicated & qualified people, equal representation from teaching, research, extension;
- o Leaders (research) and people from teaching, research, extension;
- o Teachers, administrators, directors, (on & off campus), students, parents, and farmers; Also industry;
- o All of the one above; also those who know how to evaluate;
- o Broad representation (as 2 above) but Directors need to delegate representation to underlings;
- o All disciplines, students, teachers, administrators, & policy-makers.
- o Researchers, administrators, teachers, students; also representation from support staff (e.g. those who handle accounts, etc.);
- o On-campus and off-campus personnel; students; someone from industry;
- o Research/Teaching/Outreach; students community, support staff; farmers; agribusiness; government civil servants, PARC;
- o Qualities:
 - * "Guts"
 - * Leadership Skills
 - * Good Communicators
 - * Know how to evaluate
 - * Mission oriented
 - * Dedicated
 - * Committed
 - * Not arguing for a particular group (i.e. lobbying)

Get Approval for Mandate:

- Syndicate through VC.

Enlist Cooperation:

- Approach & explain & discuss;
- Develop explicit proposal;
- Personal contacts and collective (group) approach;
- Build cooperation with personnel, on and off-campus, and administration (concerned individuals);
- Projection of group's work;
- Develop proposal in form of written document; make copies and present to VC and Syndicate;
- Enlist via syndicate; also consult with teachers, students, researchers so syndicate alerted in advance. Perhaps a presentation;
- Develop quality proposal to Syndicate, through VC;
- Develop draft proposal in collaboration with USAID/Team and give to VC for feedback;
- Provide summary of proposal in a logical way.

Approved

Table A Allocation of training slots based on perceived current need for all staff and taking into account previous involvement in advanced academic training. (2 Nov 1989).

Discipline Area	Current need (1)	Previously Involved (2)	Calculated Training Slots (3)	Actual Training Slots (4)
1. Agronomic Production	86	16	10	4
2. Agron. Plant Breeding	43	10	3	8
3. Soils	57	15	2	3
4. Horticulture	56	5	11	11
5. Agr. Engineering	14	3	2	2
6. Atmospheric Science	5	0	2	1
7. Animal Science	51	7	8	8
8. AE&RS	15	4	1	2
9. Ext. Educ/Comm.	10	3	1	1
10. IDS	24	3	4	5
11. Entomology	30	4	5	5
12. Plant Pathology	23	4	3	4
13. Food Sci/Tech.	26	4	4	3
14. Agr. Chemistry	8	0	2	2
15. Human Nutrition	4	1	1	1
16. Seed Technology	0	0	0	0
17. Other	45	5	6	5
	497	84	65	65

- (1) Both on- and off-campus combined.
- (2) Previously involved in advanced academic training as of March 15, 1988 i.e. total of completed and in-progress. Includes academic training completed in 1986 or later with either a Ph.D obtained inside or outside Pakistan or an M.S. outside Pakistan. 67 of the 84 total cases were TIPAN sponsored.
- (3) 84 previously involved plus 65 remaining TIPAN slots = 149 total. 149 total divided by 497 current need = an average of 30% of professional staff to be trained. Minor arbitrary adjustments were made to accommodate high priority areas. Training slots determined by multiplying 30% times current need and subtracting previously involved.
- (4) Per decision of Deans and Directors on 2 November 1989.