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R E P O R T

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DATE: 20 August 1981
TO: Acting Director, USAID/Niamey
FROM: Michael M Horowitz, Institute for Development Anthropology
SUBJECT: Evaluation of the Sociological Components of the Tier Range and Livestock Project

1. Objective of report. This report aims to provide the U.S. Mission and the Government of Niger with a professional assessment of the sociological research work being carried out under the NML Project. It will be incorporated in the draft evaluation report to be compiled and edited by the evaluation team leader. The specific statement of work called for a written assessment of the sociological research methods and products of the NML Project with comments on the utility of that work to NML Project and livestock sector goals. This will include an assessment of the articulation of the research relative to sector information requirements, identification of research gaps, and elaboration of the methods by which these gaps might be filled and the sociological research product of the Project improved. Specific recommendations will be made for the application of these research results to a program of development interventions in the project zone.

2. Resources used in preparing this Report. This review is based on materials gathered between 6 August 1981 and 20 August 1981. Three kinds of information were employed:

(a) NML Project documentary materials made available to project management for review. These included reports by Thomson, Elligan, Swift, Loutan, White, Maliki, Knight, and Fitzgerald.

(b) Conversations and discussions with Swift, Loutan, White, Knight, Mohamedoun, Fitzgerald, and Curry, and with project management staff.

(c) Field observations in the company of Loutan, White, Knight, Mohamedoun, Fitzgerald, and Curry.

These various materials were assessed against a background of the sociology of rural Niger and of the ecology of pastoral production systems in semi-arid regions of the Sahel, the Sudan, and East Africa.

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4. Research Objectives. A clear statement of the goals of sociological research on the NRI Project appears in the Second revised work Plan of November 1980:

The objective of the socio-economic work of the project is to provide tested, socially-feasible, economically sound and replicable methods of development, based on the wishes, values and needs of the pastoral inhabitants of the project zone. The major project goal of pastoral development is operationally defined as increased, more stably-distributed incomes for the pastoral inhabitants of the zone, earned in an ecologically conservative manner. A sustained or increased supply of meat or milk for urban and rural consumption and for export is an additional project goal to the extent that it does not conflict with this primary objective.

The original logic for the emphasis on inquiry before action was soundly based and remains valid. It starts with the general recognition that interventions in the pastoral livestock sector have rarely proved effective. With the exception of certain veterinary actions, livestock development projects in semi-arid areas of Africa and the Near East exhibit dismal performances. An analysis of these failures has shown almost invariably there is a great discrepancy between the perception of pastoral practice on the part of development planners and its reality. That is, interventions are seldom based on the social and ecological realities which obtain. A whole mythology about pastoralism has developed which serves to justify actions which fail: "The tragedy of the commons"; "animals are maintained for prestige rather than economic reasons;" "herders do not respond to the market;" etc.

The research phase of the NRI Project was designed in order to predicate such interventions as might constitute a second phase squarely on an understanding of the socio-economic and ecological realities of the production systems in the project zone. Both the DCE and the NRI are to be congratulated for the wisdom of this approach; the delay in mounting interventions in the zone should be more than compensated by their efficacy. The socio-economic components of Phase I of the project may be characterized by the high quality of the conception, the personnel, and the products. There are nonetheless a number of problems which must be considered below, which may be divided into two interrelated issues: communication and coordination. We shall turn to these in the next section.

3.1 Field Staff. It is important to note at the outset that the quality of work produced to date by the socio-economic unit (both full-time staff and consultants) has been in general high, and in several instances first rate. This is due to the unusual, indeed rare, qualifications of

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the research team, and to their enthusiasm for field work under difficult conditions. While the formal training of members of the field team is variable (from B.A. to Ph.D. candidacy to post-doctoral persons), they are uniformly talented, productive, and indefatigable. They show high competence in French and in the specific local language required (Tamil, Igbo, Sulu, and Hausa). The TSAs who were observed working with "ware" and "vogaabe" pastoralists are models of excellence. They see living under the difficult conditions in the field as a privilege, not a penance, and are eager to spend as much time as necessary to do useful work. They have established deep rapport with the local people. NBL project management could be complemented for the selection of these persons. The involvement of former PCVs, even without the usual formal qualifications (such as doctoral candidacy), has proved to be very effective.

4. Communication and Coordination.

4.1 Communication. The socio-economic unit has produced a substantial body of ethnological, sociological, and economic materials dealing with the several ethnic groups within the project zone. To a non-specialist, some of this material may seem only remotely relevant to project objectives, and may therefore engender both a misunderstanding as to its significance and an impatience to get on with "the real business" of development. Some of the responsibility for the lack of understanding and appreciation of the findings to date rests with the team itself, especially with senior personnel, who have not effectively communicated its importance to non-social scientists in both the GOK and USAIL. This failure to communicate effectively to specialists in other fields and to program and planning officers is hardly unique to this project. Many social scientists are surprised to learn that the significance of their findings is not necessarily self-evident or immediately apparent to others. Rather than displaying the skepticism or know-nothingism, the project must make a great effort than it has so far to bridge the gap in understanding. Both GOK and USAIL personnel should be shown the direct linkages between the findings and alternative courses of action.

This does not mean that the time has come for a full-blown delineation

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of NEL Phase II. Sociological studies require a rather extended gestation period before final results can be obtained, and we sympathize with the team's reluctance to release only partial information which may, by its incompleteness, mislead rather than inform. Considerable time and effort has been invested by the field staff not only in obtaining adequate competence in the local languages, but also in proving themselves worthy of the confidence of the local people. Herders have good reason to be cautious of confiding in strangers. The fact that the NEL socio-economic field staff are willing to devote years under conditions that most AIL officers would find physically unacceptable, and the fact that they have achieved excellent working relationships with the herders, constitute great strengths of the Project and necessary conditions for the generation of non-trivial analyses of the pastoral production systems. Much time was needed to identify and train local assistants and to adapt research schedules to local languages and conceptual systems. (The involvement of persons from the local groups rather than introducing secondary school students from elsewhere has been an inspired innovation in the research, and should be emulated in other places. ^{Semi-}educated persons often find themselves alienated from the rural scene, and their use in research may introduce as many problems as benefits.) Now that the teams are well-established we anticipate a marked increase in production which, if properly presented, will serve to mitigate much of the current misconception as to the salience of the research, and will provide a solid grounding for Phase II action.

In short, the Project is better than its press. But the sometimes unfortunate image which it has among some GON and some USAID officials needs to be corrected by thoughtful presentations and sharing of project findings. We therefore recommend the preparation of a summary document which outlines the findings to date and indicates the implications of these findings for alternative development scenarios. The document should be written for use by non-social scientists. The timing is crucial, because it must be available well before the commencement of the Phase II design cycle. Ideally such a report should be prepared by the field team, with major responsibility assumed by the senior consultant. If the team's research schedule precludes spending the time required to coordinate with the Phase II calendar, then a contractor familiar with the country and specializing in the ecology of pastoral production systems, and knowledgeable about

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livestock development could be brought in to do the job in close collaboration with the field team. About 30 days in country should be sufficient. It would be most unfortunate if the planning for NAL-II got under way without the benefit of being guided by the findings of NAL-I. A summary statement would in no way substitute for the monographic reports expected at the termination of the field research, but it would go a long way to clearing the air, and to creating an atmosphere receptive to a continuing monitoring and evaluation capacity in NAL-II. At this point it is not at all certain that such a capacity would be received with enthusiasm.

4.2 Coordination. A full ventilation of the issue of project management and coordination will be found in the complete evaluation team report. We shall mention here, therefore, only a few points which relate directly to the operation of the socio-economic research unit and to the description and analysis of the pastoral production systems in the project zone. A number of field staff persons spoke of the problems caused by a lack of coordination between the research efforts of the range management and socio-economic teams. The position of coordinator is identified in the NAL program, but is unoccupied. The division of labor between the two field teams has had the effect of the socio-economic group focusing primarily on actual systems (in vivo) and the range management group focusing on experimental, controlled systems. Both approaches are valid. Since the socio-economic group has elected to concentrate its attention largely (though not exclusively) on household level studies (see Section 5.1), they have little opportunity systematically to comprehend the ecology of the ongoing production systems. Through observations made in the field, they have some good insights into that system, but they are not in a position to undertake systems level analyses of the dynamic relations among herders, animals, plants (including both terrestrial and arboreal pastures), water, etc. Systems ecology risks falling between the twin gaps of the Project. It is critical that this omission be rectified immediately in order that a full year's transhumance be described and analyzed while there remains project time to do it. (It is unfortunately too late for such an analysis to be available in the initial design of the Project, but the findings should prove useful for implementation.) Project management

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would seem to merit very high priority in project thinking while there remains the possibility of doing something about it. If left unresolved much of the potential payoff from the Project will be severely attenuated.

Involvement in the Project of GCE students identified for training in the United States deserves separate consideration.

4.3.1 Involvement in the Project of GCE Students An enduring benefit of Phase I of the Project is the group of Nigerian students currently in long-term training in the United States. Several of these students are enrolled in rural sociology programs, and one of them, Sam Ibrahim, participated effectively in the 1979 AID Workshop on Pastoralism and African Livestock Development. It is hoped (and presumed) that these persons will become actively involved in the ongoing monitoring and evaluation work of any Phase II of the Project. (It is disappointing, however, that their involvement in Phase I has been marginal at best and, for the rural sociology students, effectively non-existent. We have been unable to ascertain why this is the case, since it is reasonably self-evident that the Project and the students would profit from their collaboration in the research. The nature of that collaboration requires a good deal of thinking, and several innovative possibilities present themselves. In addition to the usual summer visit to the Project zone (as several of the farm management students have done), the formal schooling might be interrupted with a full year in the field, in order that the student has the opportunity to adapt classroom and laboratory instruction to the realities of the field situation. Senior research staff might be invited to participate in designing the study program, offering extra-mural commentary on research papers written, and otherwise involving the student in Project-related activities both in Niger and in the United States. A similar point was made by

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Bagoudou Maidaji, who spent this past summer on a well survey and on Project ranches: "Nigeriens should be sent out in the bush to stay with these PVs for two or three weeks at least... Let's not forget that sooner or later these Volunteers will rejoin their families and it will be worthless if they have to go back with all they have learned without anybody to benefit from them."

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5. Assessment of Socio-economic Research Activities. From our discussions with the members of the socio-economic unit and an examination of their work to date, we are confident that the final products in the form of the monographs outlined in Annex 1 of Dr. Swift's report of 12 April 1961 will be of high quality, relevant to the concerns of those responsible for development interventions in the Project zone, and substantial contributions to the literature on pastoral production systems in general and the ecology and sociology of production in Niger in particular. As has been noted at several points in this report, the problem lies not with the methodology or the products of the research but with the perception of that research on the part of persons external to the Project. We have proposed above an approach to solving that problem.

Such points as might be raised about the research relate not to its quality -- which is uniformly admirable -- but more to its bases and to what appears to be a general absence of an overall framework or theory from which non-random hypotheses to be tested in the field are derived. This theoretical absence is curious since the senior consultant to the socio-economic unit is fully knowledgeable about the various biological and socio-political theories currently invoked to account for various characteristics of pastoral production systems. Perhaps the framework is implicit in the several studies being undertaken, but if it is not clearly apparent to those TSPs mentioned, there is, of course, a respectable empiricist tradition in field anthropology which produces its explanations from an examination of data. Yet given the sophisticated elaboration of theoretical discussions about pastoralism to which one continues to wonder why such discussion is so understated in the Project.

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It is recommended that the socio-economic unit (with the participation of interested members of the range management unit and the Project administration), during their next group meeting, consider carefully the theoretical implications of the work, and determine how the various sub-studies (household level studies, mapping, etc.) form a coherent whole. Such a consideration should be productive of new hypotheses for testing which need not radically reorient the direction of inquiry, but might make the products of the studies more useful. Without in any way prejudging the outcome of this consideration, it is recommended that the socio-economic research unit examine the pertinence of regional analysis, as elaborated by Dr. Carol Smith and her associates. Such an approach has not previously been explored in a pastoral area, yet it appears to have considerable potential value. The regional analysis provides a bridge between the kind of micro-level studies represented by the household level inquiries (see 5.1) and the larger political economy within which the pastoral production system operates.

5.1 Household Level Studies. In the absence of an elaborated framework against which to relate the specific studies being made it is difficult to be sure that the efforts involved

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are invariably commensurate with the products. For example, a great deal of effort is going into the household level studies. They are consuming the bulk of attention of three TSAs plus a large number of field assistants. These involve highly detailed recordings twice weekly of budgets, transactions, time, labor and capital allocations. The methodology to elicit the information is sound and there has been an interesting and novel approach to measuring of time among the herders. In tandem with a similar household level survey in Mali, this is the first time that such systematic examination has been undertaken among pastoral herders. The data will be much appreciated. Given that it is enormously consumptive of research time, is the emphasis justified? Ought more attention be paid to a larger arena of action than that of the household? Having wrestled with this question for the past ten days or so, I am tending increasingly to feel that it is indeed worth the effort, although I continue to regret the necessity of similarly systematic observation of the production system in action.

The information to be derived from these household level surveys is an essential component of an understanding of how pastoral associations might best be organized, for they provide enhanced understandings of the nature of credit and debt. The studies should reveal how debt is organized, how it is retired, what kinds of guarantees are made. Through the depiction of social differentiation -- assuming the samples are large enough to pick it up -- we should have a better sense of how to direct credit programs to the needy rather than see them coopted by the already affluent. By providing detailed information on the connections among income levels, control over animals, labor mobilization, etc., these studies should give us answers to a wide range of important questions.

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5.2 Mapping and Aerial Surveys. The socio-economic unit is producing a useful series of maps identifying the movements of Tuareg and Wodaabe across a year's transhumance, locating watering points and identifying their ownership, and defining the major environmental features which relate to these movements. One of the obvious payoffs from this activity is the demonstration of the survival value (the "adaptive strategy" of mobility with a minimum of formal constraints. In the first place, any particular range will, over the course of a year, be used by a number of groups. (While this multiple use of land has long been demonstrated at the northern edge of the cultivated zone, where herders pasture on cropped stubble after the harvest, enriching the soil with high quality manure, this study is the first to detail that usage among diverse groups -- ethnic, lineal, camp -- of herders.) In the second place, each group must have access to a wide range of lands of different kinds. Since rainfall is variable in quantity, location, and distribution, and therefore one cannot predict with certainty the useful condition of pasture, it necessarily follows that range use must be highly flexible: there should be no attempt either to restrict the movements of a group or to lock them into a rigidly delimited area, such as might constitute a "pastoral unit".

The mapping exercise is limited by several factors. First, a single year's movements, or even a few contiguous years' movements, will not adequately represent the full thrust of mobility as an adaptive strategy. Since one cannot project readily into the future, it is important that the work of Maliki in defining past movements be closely linked to the maps, to indicate the kinds of changes which obtain over time, and its association with droughts, epidemic disease, etc. Second, in the interest of clarity, the lines of movement are presented as parallel among groups, to avoid a

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hodge-podge of intersecting curves on the map). But this is capable of giving the false impression that each group moves through a unique territory, and that therefore it can be given exclusive responsibility for its management. The socio-economic field team is, of course, fully aware of this, and our caution is merely to alert them to a possible misinterpretation by others, especially as some form of sedentarization or range "management" by restricted movement is a recurrent theme on the part of livestock sector planners who either do not understand the ecology of pastoral production systems in the Sahel or who identify themselves primarily with constituencies other than the herders. Third, the movements in space must be related to decisions about the quantity and quality of pasture, the presence or absence of others with whom amical or contentious relationships exist over water, etc. As has been indicated above, the ability to identify the micro-ecology of movement is limited in this Project by the absence of a field study of pastoral movement in vivo by individuals with the necessary qualifications to identify the relevant physical conditions. A bridge is needed between the perceptions of range, which can be recorded by the anthropologists, and its objective biotic and physiographic features. Where such joint anthropological and environmental ecological optics have occurred in the past, a far more persuasive understanding of the conditions of pastoral movement and range use has emerged. The herder emerges from such a study as a careful manager of range and animals, whose constraints on production cannot be attributed to "tradition," which calls for the imposition of changes from without, but from the inadequate control over resources associated with poverty and with political vulnerability. The field team is well aware of these factors, and we do not belittle the problems in the attempt to deal with them.

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5.3 Herders Associations. Among the most interesting and important findings of the socio-economic research unit deal with the question of the establishment of pastoral or herders association. Such associations, often in association with the notions of "pastoral units" and "pastoral centers", have enjoyed a certain vogue among development planners in the last five years, and projects involving such organizations have been appraised in Niger, Chad, Senegal, and elsewhere. None of these which we have examined bases itself on what the herders define as their own prime requirements. That is, pastoral associations have been seen as instruments for increasing productivity to meet domestic and export demands for meat, and as instruments for the imposition of range use controls (through limits on stocking, rotational grazing). In return for accepting increased offtake and range use controls, the herders are supposed to receive a package of services, including water point improvements, veterinary services, and, perhaps, credit.

The work of the socio-economic unit starts from the point of view of herders themselves, and their perception of their own needs. What emerges over and over again from the reports is the intense poverty of large numbers of pastoral people in the zone. Many of those who lost their herds during the drought have not been able to re-establish themselves. Having few or no animals, has meant having no milk for domestic consumption and no money with which to purchase other necessities, especially millet. An index of the extent of this poverty is the large number of persons who work as herders and shepherds for urban-based traders and functionaries and for more affluent Hausa farmers who invest in animals. These herders have access only to the milk and not to any offspring as may be produced. Thus such labor does not serve as an interim means of herd substitution, and is simply a survival stopgap.

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From the point of view of these impoverished persons, the Herders Associations must respond to the condition of insufficiency of animals and inadequate supplies and availability of grain. Such credit mechanisms as are introduced must assure that funds are directed toward those in need, and not coopted by the already affluent. A reasonable time for repayment must also be established, since quite a few years are needed for a cattle or camel herd to reach the point of sustainable off-take without compromising demographic stability.

Among the other interventions which might be associated with Herder Associations, the local people mention human and veterinary health interventions, and reasonably priced consumer goods such as tea, sugar, and cloth.

What do the herders think about "range management"? It is clear that they think about it a good deal. They recognize the relationship between quality/quantity of graze and the number of animals which ought to be sustained on it. They distinguish subtle differences in nutritional quality of different grasses and trees. They resent the access pressures on the range from the northward migration of cultivation and from the transhumant movement of herds from the south into the Project zone. They wish that could be restricted. But -- and this is a crucial "but" -- they also know that open access to range is their primary survival mechanism, and without it they would be trapped by the first bad year. Therefore, they are suspicious of any proposal which, in the interests of improved forage, would have the effect of limiting movement or arbitrarily limiting the number of animals which might be grazed.

In addition to the reports of the regular members of the socio-economic unit, a very useful document has been produced under contract by Dr. James Thomson, Nigerien Herder Associations: Institutional Analysis and Design.

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5.4 "Practical" Determinations and Actions of the Socio-economic Unit.

We have indicated above some of the development implications of the research undertaken by the socio-economic unit. There remain a number of items which should also be mentioned, although without extensive commentary. These have emerged in the process of the field work, and constitute important areas for practical actions aimed at benefiting the local populations.

5.4.1. The identification of Vitamin A deficiency causing night blindness in ruminants in relation to changes in range composition, especially in the arboreal pasture. The herders felt it pointless to discuss this disease with livestock service personnel since they knew that the cause lay in the nature of the browse and that the livestock service was not in a position to do anything about it. Fortunately, the deficiency can be rapidly corrected with injectible or oral doses of Vitamin A (as in cod liver oil). The identification of this browse-related ailment further expands our knowledge of the decisions made in the selection of pasture.

5.4.2. The successful training and supervision of paraveterinary workers.

5.4.3. The emerging comprehension of why herders are often reluctant to have their animals vaccinated against rinderpest. The reluctance is due not to any irrational thinking, but to a reasonable assessment of the costs and benefits, that is, of the potential losses from vaccination (including illness, abortion, depressed quantities of milk, and even death). They also recognize that certain animals are exceptionally difficult to manage, and these "wild" animals can wreak havoc if brought into a crowded vaccination center.

5.4.4. The discovery that "ownership" of water points does not necessarily accord exclusivity of access to either the water or to the surrounding range.

5.4.5. The importance of leaving certain areas without watering points to preserve the range as a natural seed multiplication center.

5.5 The Impact of the Grain Trade and the Northward Migration of Agriculture. At first glance, the socio-economic research unit's concern for agriculture may appear tangential to a study of pastoralism but is in fact an essential component. As per capita millet yields decline and as small farmers become increasingly indebted to grain merchants and larger farmers to the point where the harvest is mortgaged to pay off accumulating credit, the pressure to expand production through intensification and through the extension of cultivation is very great. The northward movement of farming has ecological ramifications both in the cultivated fields -- whose soils are too thin to withstand the assault -- and on the pastoral range which necessarily contracts. Thus, "overgrazing" may be caused not by the will of herders but by the loss of range to farming. Ultimately the fault lies neither with the small producers, but with the huge export of grain from its area of production to the towns and across frontiers. This in turn causes a marked rise in the cost of millet in the countryside to both farmers and herders. For the latter, the additional costs of transport means that many simply cannot afford to eat grain or must further reduce already depleted herds to earn the necessary funds. Both small farmers and small herders are victims of the system. The agro-pastoral study should provide the necessary analysis of this system and perhaps identify those points at which remedial action might be taken.

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6. NRI-II, Monitoring and Evaluation.

An important body of material about production systems in the NRI-I Project Zone has been collected by the socio-economic research unit. Its analysis should provide major guidance to any subsequent work. It would be a great mistake, however, to designate the two phases as "research" and "action" respectively. The momentum of study generated by the socio-economic unit will be a source of continuing strength to the Project if it is effectively incorporated into a Phase II monitoring and evaluation unit. In addition to continuing the Phase I studies, the monitoring and evaluation unit would provide the CGR and NSAIL with close supervision of the impacts of various interventions, constituting an early warning system in situ, and providing the assurance that the intended beneficiaries are indeed profiting from the proposed actions. In order to maximize the contribution that such a unit might make, we further recommend that the current members of the socio-economic unit be invited to continue their work as members of the monitoring and evaluation unit. Similarly, those Nigeriens in long term training in the United States might particularly be offered positions on that unit (or elsewhere in the Project) before assuming their permanent positions in the Ministry of Rural Development.