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REVIEW OF USAID BOLIVIAN URBAN FUNCTIONS IN RURAL  
DEVELOPMENT PROJECT IN POTOSI, BOLIVIA

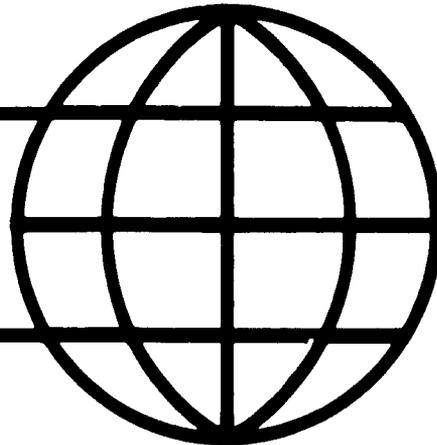
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## **BACKGROUND**

From August 9 through 16, 1983, Professors Yapa and Rushton visited Potosi, Bolivia, the site of the UFRD project in Bolivia; the USAID Mission, La Paz, Bolivia; and Oruro, Bolivia. The visit was organized by Clark University, under the aegis of its Cooperative Agreement with AID for the Regional and Rural Development Division of the United States Agency for International Development. They were accompanied and assisted by Mr. Hugh Evans, the USAID long term resident adviser in Potosi from September 1979 through October, 1981. This report should be read along with Hugh Evans' two volume report on the project: Urban Functions in Rural Development: The case of the Potosi Region in Bolivia. Part I: Concepts, Methods and Application; Part II: Preliminary Evaluation. The Potosi UFRD project was the last of three such projects begun by the Office of Urban Development of AID and completed by their Regional and Rural Development Division. Two previous had been in the Bicol River Basin, the Philippines and in Upper Volta.

## **PURPOSE OF THE REVIEW**

This review assesses the extent to which the major goals of the UFRD Project were realized in Potosi and of the impact of the project on the process of regional and rural development of the region. It reviews the appropriateness of the UFRD methodology for the task of Regional Development Planning in situations like that of the Department of Potosi.

### **Major Goals of the UFRD Project in Bolivia**

1. To assist in developing a Regional Development Plan for the Department of Potosi, a major purpose of which was to provide better access to urban services by the rural population.
2. To improve the planning capability of the regional corporation (CORDEPO) and to affect the planning process of urban functions in Potosi so that decisions made would be more consistent with the needs of the rural population for better access to urban services.
3. To test in Potosi and to improve the UFRD Planning methodology developed by Dennis Rondinelli (Rondinelli 1980) and to train local planners in the use of UFRD methods.

## REVIEW

### I. Testing and Improving UFRD Methods.

The UFRD project in the Department of Potosi in southwest Bolivia was organized within the Planning Department of CORDEPO, the regional development corporation for the department. USAID funded a resident adviser (Mr. Hugh Evans) and provided partial funds to support the field work required by the UFRD methodology. This was completed in an eight-month period between August 1980 and March 1981. Much of the work for the project was carried out by CORDEPO resident planning staff.

Although there was a major change in the leadership of CORDEPO (following the coup of July 1980), the cooperation of the CORDEPO organization and the commitment of its planning staff to the project during the time of field work, data analysis and plan formulation was outstanding. Under the able leadership of Mr. Evans, the analyses prescribed in the Rondinelli methodology were completed on schedule and are well described in his report (Evans 1982a, 9-62). Included are a basic analysis of the region's resources and potentials, an analysis of the settlements of the department and an analysis of the linkages between the urban areas and their rural hinterlands. These analyses were supported by field surveys of the urban areas, surveys of selected markets and a sample survey of 200 households in the department. In addition to the methods of analysis prescribed by Rondinelli, Mr. Evans, with the assistance of Dr. John Dickey, designed and implemented a series of analyses in the region which were designed to identify and to prioritize the areas which were most inaccessible to important urban functions. Known as "The Accessibility Model" the results of these analyses are described in Evans' report (1982a, 63-76).

From these analyses a "Regional Development Strategy" was designed by the Planning Staff of CORDEPO with the assistance of Mr. Evans. It consisted of a global strategy for the region emphasizing an increased level of support for agriculture (which had been in a state of absolute decline in the Potosi Department in the past decade) and specific support for a strengthening of:

the hierarchy of central places, particularly the small and intermediate-sized settlements; to improve the linkages between them and their surrounding communities, in order to integrate isolated or peripheral areas; and to provide the necessary facilities in each center to support agricultural production and to meet the basic needs of the predominantly rural inhabitants (Evans 1982a, 95).

Strengthening the hierarchy of central places meant selecting places that could provide important services to rural populations that currently do not have adequate geographical access to them and planning for the provision of these services there. Improving linkages meant planning for the construction and upgrading of roads linking the urban areas and linking the rural hinterlands to the towns on which they depend for services essential to their economic and social welfare.

A second aspect of the Regional Development Strategy that was developed from these analyses was the design of packages of projects for sub-areas of the region. This element was known as "The Integrated Area Development Component."

The personnel of the Potosi pilot project showed considerable initiative and innovation in recognizing certain deficiencies of the original methodology. For example, they discovered that UFRD methods do not explicitly assess the needs of the rural population for improved access to urban services. They saw that, although the study of spatial linkages reveals the broad interconnections in the urban hierarchy, it does not show the level of accessibility of rural people to specific services located in specific urban centers.

Despite the many instances in the writings of Rondinelli where the importance of geographical access to urban services is emphasized, the published UFRD methodology gives no direction on how rural areas that are significantly disadvantaged with respect to access to urban functions are to be identified and their relative needs prioritized. In this respect UFRD methods represent an urban view and do not explicitly take into account the needs of the rural areas in providing urban services. AID sponsors of the three UFRD projects may be surprised by this conclusion. We found, for example, that although six health posts had been constructed recently in rural communities at the request of the Servicio Nacional del Desarrollo de la Comunidad, UFRD methods applied to this situation would not have shown improved rural access to health services because these posts were located in rural communities and UFRD methods operate on data from a survey of functions in urban areas.

Thus, UFRD methodology, despite its stated concern for rural people, uses methods that are urban centered. These methods do not take rural needs as the point of departure and solve for the best ways of meeting these needs. If the conclusion of such a rural centered analysis were that these needs could best be met through the strengthening of the existing urban hierarchy, then plans and projects should be developed to strengthen the existing urban hierarchy. The Potosi project, however, was founded and funded on the unsubstantiated premise that the strengthening of the existing urban hierarchy was the best way to improve rural access to services. In this context, the Accessibility Model introduced by Dickey and Evans to UFRD methods is clearly a recognition that access to urban functions should be measured directly as should also the consequences on rural accessibility of filling any "functional gaps" in the scalogram. It was, therefore, an important and positive conceptual improvement in the UFRD methodology.

Three problems arise, however, in the specific way in which these accessibility analyses are introduced. First, in attempting to add a geographical accessibility component to the UFRD methodology, Evans and Dickey are ignoring a fundamental flaw in the original UFRD methodology. The question that needs to be answered is whether "gap analysis" (as identified from a Scalogram analysis of the presence or absence of functions in urban places), is the more appropriate way to identify which functions should be added to which places in order to improve rural access to urban services or whether geographical accessibility analyses should be used for this purpose? The answer, surely, is that if one has reason to believe that rural populations need better access to urban

services one should first measure their geographical access to the services in question; determine what level of access is possible given limited resources when allocated geographically in an optimal way; finally, determine whether the improvement that is possible would make an important difference to the levels of productivity and welfare of the affected populations. This approach to the problem was not followed in Potosi because the project began with the decision to replicate the methodology which had been used in The Philippines. By regarding the accessibility analyses as complementary in an undefined sense to the functional gap, analyses, however, it is unclear in the work of the Potosi group how the results of these analyses are to be used in the process of developing a concrete plan for improving urban services for the benefit of rural populations. We had occasion during our visit to the Planning Corporation in Oruro where UFRD-type planning is currently in progress to speak to the planning team about the functional gap analyses and the accessibility analyses. The results of their analyses provided a descriptive framework of the human geography of the region, but they did not lead directly to plans for improved levels of service.

Our conclusion is that the accessibility analyses represented a major (and long overdue) conceptual improvement to the UFRD methodology but that the effectiveness of this innovation was marred by the fact that no clear decision was made that geographical accessibility questions and supporting analyses rather than "functional gap analyses" should have been the basis of plan formulation. By creating and maintaining ambiguity on this point, the path to a clear and replicable methodology is obstructed.

A second problem with the Accessibility Analyses was the decision to measure geographical accessibility of an area to all occurrences of a service wherever they may be in the region. When planners respond to the needs of people for better access to urban services, they respond to a need for people at specific sites for access to a service at specific sites. They do not respond by raising some average distance of people in some large area to all occurrences of the specific service in the greater region. The analytical need is for a measure of access deprivation that is directly interpretable as a meaningful measure to be improved by a specific action. The measure of the value of the suggested action should also be a measure of the expected outcome. It is the tradition in planning studies of the location of services to use the distribution of travel distances to the closest occurrence of the service of interest as a measure that reflects need for improvement, to compare that measure with values that would reflect adequate levels of geographical accessibility, and to compute the minimum number of additions and their locations that, if implemented, would lead to an adequate level of geographical access to the service by the people of the region. The Potosi project departed from this tradition and introduced more complicated measures that, in our opinion, simply served to obscure these simple patterns of need and rendered more difficult the task of prioritizing the areas of need.

A third problem with the Accessibility Analyses was the decision to aggregate data into geographical areas (zones) that measured an average of 20 kilometers across. This decision to aggregate in zones people who were in fact distributed throughout each zone would inevitably cause errors and biases in measuring the access of rural people to services. Because the size of the

zones varied throughout the district, these errors and biases of people and the locations of the services were known to a finer geographical level than zones and it was unnecessary to aggregate these data to the zones. Measures of geographical access to the services in question could have been computed in a "regional accounting model" that preserved the geographical detail of the original data. The computations would have been simpler to compute, easier to understand by both planners and others, and be seen to be more relevant to the decision task of selecting sites for expansion of key services. Methods and literature do exist to do this.

Despite these problems, it is clear to us from an examination of the Potosi planning documents and our interviews with the Potosi Planning team that their identification with the development problems as experienced by the different areas, led to a common-sense approach to the identification of problems and solutions. They did not let methods and methodology interfere with their central task of formulating a five year plan. The plan was completed and, as discussed below, we found evidence that it had been used in selecting and implementing development projects in the department.

## II. Coordination of Plans with Other Sectoral Agencies.

The UFRD planning group was the planning staff of the department's Regional Development Corporation (CORDEPO). Although it was clearly the most appropriate institutional base for the activity, it is also clear that for the goals of UFRD planning to be accomplished, other development agencies should also have been involved in plan preparation and implementation. CORDEPO has primary responsibility for providing only two of the urban functions most frequently associated with the UFRD approach. These are drinking water projects and rural road projects. Other major functions such as health, education, irrigation, marketing, transportation are predominantly in the hands of other groups. To be successful, therefore, it was necessary for the UFRD planning team to coordinate and cooperate with these other agencies in both the development and implementation of the development plans. The strategy of the Potosi UFRD group was, however, to first develop a plan and then later to work with these sectoral agencies to solicit their cooperation in implementing the plan. When it became clear in 1982 to Alfredo Bellott (the most senior member of the Potosi Planning staff at the time) that there was reason to question the commitment of CORDEPO to implementing the five year plan and perpetuating the planning process the team had developed, he resigned to become the USAID planning adviser to CORDEOR in Oruro to begin the process there anew. Thus the process of winning over the cooperation of the sectoral agencies never really began.

We argue that this critical step in implementing UFRD planning should, in any case, not have been left to this point and should not have been thought of as a problem of convincing other agencies to adopt a plan which, by that time, was set in stone. Rather, the process of plan development and coordination with the sectoral departments should be thought of as one and the same process. There are two reasons: first, can a plan which shows how the rural people will gain improved access to health care possibly be the best plan if it is developed without considerable input from the sectoral department that is familiar

with health problems and with the problems of meeting health needs in a situation of scarce resources? Second, since sectoral departments are normally charged with the task of planning improvements in the system of services that they control, parallel and often incompatible plans will be developed if, at the same time, a second group (in this case, CORDEPO) is also independently planning for the sector. We discovered that this happened in the Potosi Department in the health area in 1981. At the same time that CORDEPO was finalizing its UFRD plan (which included health), the Potosi Unidad Sanitaria office (whose jurisdiction covers about two-thirds of the Potosi Department) developed and issued a document "Regionalization of Health Services," the principal purpose of which was to "rationalize the location pattern of health facilities according to their stated criteria." In an earlier conversation, Hugo Solis of the CORDEPO planning staff, referring to Ch. XI, Sec. 1.3 of the CORDEPO five year plan "Accessibility to Health Services," said that the health sector within CORDEPO had spent a lot of time examining the UFRD plans. Nevertheless, we concluded that the UFRD planning staff were not aware in any detail of the formal criteria that the Unidad Sanitaria had adopted for categorizing different levels of health facilities and that it would have been pure coincidence if the general UFRD plans to strengthen the urban hierarchy had led to the identification of places meeting these criteria. In meeting Alfredo Bellott in Oruro on August 15, we found that he himself had reached the conclusion that coordination should take place with sectors prior to plan formulation so that plans will be prepared that utilize the sectoral specific knowledge which should always be greater within each sector; knowledge which they will see has been the basis of the plans produced. On August 15 in the afternoon we met with Oruro Director of Unidad Sanitaria (Dr. Hervas), and learned from him that his office had worked closely with the UFRD planning team at CORDEOR and, as a result, had significantly revised their own regional plan for the health sector to conform to the hierarchy of urban service centers proposed by CORDEOR.

Our conclusion is that among the Bolivian principals associated with the UFRD project, there is by now full recognition of the importance of involving sectoral agencies from the beginning in plan formulation. In retrospect, this aspect of plan formulation deserved equal weight, alongside technical tasks of data evaluation, in the process of developing regional development plans that would serve the legitimate needs of all groups and deserve and receive the full cooperation of sectoral line agencies in the later project implementation phase.

### III. Plan Implementation.

Although the five year plan for the Potosi Department was prepared by the CORDEPO planning department, "it was never formally recognized by the CORDEPO governing board and has had very limited circulation." (Fernando Delgado, USAID planning adviser to CORDEPO) Within CORDEPO the plan seems to have been largely ignored in formulating the Annual Operating Budgets which describe the projects that will be undertaken each year. Explanations for this included the observations of CORDEPO President Gil Villegas that administrative continuity in CORDEPO had been broken in 1982 with changes in government leadership at both local and national levels; that the focus of the development plan for the

region had to be changed to reflect the three current national priorities of employment generation, increased food production and export generation. Many of the specific items in the UFRD plans that would directly contribute to these priorities are being adopted, he said. Luis Sanchez, Managing Director CORDEPO, told us in a meeting on August 12 that the delay in receiving funds (CORDEPO's funds are linked in part to the prosperity of the mining industry which has been depressed locally in recent years), and the reduced amount of funds has led to a delay in implementing the plans. He also pointed out that while the law of 1978 had transformed the public works committees into development corporations, they were not relieved of their obligations to continue providing public infrastructure in the region, since no other entities had undertaken to do so instead.

Within the rural roads department, which is an active department within CORDEPO, we did find evidence that the staff was implementing many of the specific projects identified in the UFRD studies and were applying many of the spatial planning principles used in the UFRD methodology.

In several meetings we were told about international development organizations that had expressed a keen interest in the UFRD studies and plans. CORDEPO had found UFRD projects and the supporting rationalizations and analyses useful when approached by such groups. CORDEPO President Villegas spoke of negotiations that had just started with the European Economic Community that are based on UFRD projects. CORDEPO planning staff spoke of their use of the UFRD plan documents in designing projects for integrated area development that are now being implemented in three areas in the South Potosi Department by FIDA (International Fund on Agricultural Development).

We therefore conclude that the UFRD study and plans have so far affected only to a small degree the project implementation activities of its parent organization CORDEPO; that it has affected little, if any, of the activities of related sectoral agencies but that it appears to have been important in attracting to the department several international agencies (five were named) who were seeking to fund the kind of detailed area development projects that the UFRD study produced.

#### IV. Training Bolivian Planners in UFRD Methodology.

The Potosi UFRD project succeeded in gaining the attention and influencing the views of regional planners throughout Bolivia. Although our visit was short and our plans to visit the Sucre Planning Department had to be cancelled, nevertheless, our exposure to Bolivian planners in La Paz, Potosi and Oruro was sufficient to support the conclusion that UFRD methods are now widely known and, in broad terms at least, are understood. In our meeting at the Ministry of Planning and Coordination, Regional Planning Division in La Paz, we experienced a perceptive, critical evaluation of the UFRD approach by Jorge Urquidí and María Teresa Aquirre aimed at increasing the scope and comprehensiveness of the planning methodology. At the same time, they were acknowledging that both the spatial focus and the rural-urban linkages focus had represented a real contribution to regional planning approaches in Bolivia and that through the

workshops conducted by the Potosi group and their written materials (in Spanish) on the approach, there was widespread interest in the approach in other planning departments in the country.

In Oruro we saw at first hand a full-scale replication of the UFRD methodology. In addition to the technical accomplishment of data gathering and data analysis in that region, there was plenty of evidence that these results were being used creatively in a dialogue with other agencies whose budgets and administrative authority included the organization and delivery of urban services. We wish we could convey here the spirit of competence and enthusiasm for the planning work that we saw in Oruro.

#### V. Scope for Further Work.

Discussions of the impact of a project like UFRD on the regional planning process of a developing country like Bolivia inevitably raises the question of what steps are most critical in improving the planning process for the future. We raised this question a number of times during our visit. The Oruro group felt that training their own staff in managing the implementation of multi-sectoral project developments that need to be integrated locally was a critical need. They also felt that sectoral agencies themselves need training in regional planning if their coordination and cooperation with regional planning groups is to be effective. Our own meetings with the Directors of the Unidad Sanitaire in Potosi and Oruro confirms this. Both were actively developing regionalization plans for primary health care for which they had developed formal standards and criteria. In neither case, however, was there even a recognition that plans could be developed that would formally optimize the configuration of the health delivery system to meet their criteria subject to any constraints they might wish to add. Clearly, there is scope for improving planning practice and the level of knowledge of personnel in such areas.

At the central government level, the need was expressed that resource assessment methods need to be developed and planning staffs trained in their use. These methods would need to become integrated in the process of planning development projects. We would concur with this assessment.

The task of improving planning for rural development through improved urban-rural linkages remains a challenging one. The Urban Functions in Rural Development Project in Bolivia made a substantial contribution in its local area and within Bolivia. Much can be learned from the effort, but there is scope for further work in the future that would improve the planning process, the planning product and that would enhance the effectiveness of local planning teams.

## REFERENCES

- Evans, H. 1982a. Urban functions in rural development: The case of the Potosi Region in Bolivia. Part I: Concepts, methods and applications. Washington, D.C.: USAID, Office of Multisectoral Development.
- 1982b. Urban functions in rural development: The case of the Potosi Region in Bolivia. Part II: Preliminary evaluation. Washington, D.C.: USAID, Office of Multisectoral Development.
- Rondinelli, D. 1980. Spatial analysis for regional development: A case study in the Bicol River Basin of the Philippines. Resource Systems Theory and Methodology Series no.2. Tokyo: United Nations University.